

## The long fight against TB

Science borrows words from common parlance and assigns quantifiable meanings. For example, “significance” in biostatistics, measured by ‘p’ value, clarifies if a study result is reliable or mere chance finding. “Incidence” in epidemiology is a rate: new cases per unit population, per unit time. The incidence rate of tuberculosis (TB) in India is estimated at 200-300 cases per 100,000 population per year. As a comparison, in western Europe it is five per 100,000 per year.

“Control” in public health is “deliberate reduction of incidence to a desired and defined level by specific interventions”. Without monitoring incidence and defining the desired target, the Revised National TB Control Programme (RNTCP) is not a valid control programme, but a great humanitarian programme of free diagnosis and treatment.

India’s estimated annual TB burden is 28 lakh, 27% of the global total; our population is only 18%. Every day 1,200 Indians die of TB — 10 every three minutes. The tragedy 1,200 families face every day is beyond imagination. No other disease or calamity has such Himalayan magnitude. Had control efforts registered even pass grade, we would not have become the TB capital of the world.

Infection with TB bacilli is the necessary cause of TB, a disease that mimics other diseases, confusing doctors and delaying diagnosis. Cough and blood in sputum occur only in lung TB. For example, a young man developed headache and began making silly mistakes in arithmetic. He had brain TB and treatment cured him. Pelvic TB is the commonest cause of female infertility in India. TB can affect the lungs, brain, bones, joints, the liver, intestines or for that matter any organ and can progress slowly or kill in weeks.

In designing TB control three processes must be understood: infection, progression, transmission. Infection occurs when TB bacilli are inhaled. Bacilli may stay in the lungs or travel to other organs. Infection is lifelong, with bacilli lying dormant. This phase is “latent TB”, diagnosed by a tuberculin skin test (TST). The “annual rate of TB infection” (ARTI) is about 1%. Cumulatively, 40% to 70% of us are living with latent TB. From this reservoir pool, a few progress to TB disease, one by one, 5-30 years, average 20 years, later.

Progression occurs when bacilli become active, multiply and cause pathology; now we have “active TB”. Only when active TB affects the lungs do bacilli find an exit route to the atmosphere, necessary for transmission.

All of us, the public, health-care professionals, Health Ministry policy planners and implementers, must form a united battlefront. Beginning with schools, public education on TB and its prevention must replace ignorance and misconceptions.

Transmission and infection are ends of a tunnel. If no one spits in public places and if everyone practises cough and sneeze etiquette (covering one’s mouth and nose when coughing or sneezing), the TB affected will also fall in line.

A person with lung TB disseminates TB bacilli over several weeks. By the time treatment stops dissemination, unfortunately, all his close contacts would have been already infected. This is why TB treatment has not brought down the TB burden.

To block transmission, treatment should begin as soon as a symptom shows up. RNTCP guidelines — for testing only after two weeks of cough — result in the loss of precious lead time. Some 70% of people seek health care in the private sector. As cough is a very common symptom

of many diseases, doctors don't think of TB until other treatments fail. Frustrated patients also shop around until someone thinks of TB; bingo, the sputum test is positive. While treatment is the patient's urgent need, it will not control TB. It is like shutting the stable door after the horse has bolted.

Partnership with the private sector is essential for early diagnosis of TB. Delay in diagnosis, for which we are notorious, is a fallout of the lack of efficient primary health care. Universal primary health care, a basic human right, and a diagnostic algorithm for early diagnosis are essential for TB control. Every country that has reduced TB incidence practises universal health care.

How can progression be retarded? The biomedical method is drug treatment of latent TB. Experts recommend an age window of 5-10 years when all children must be screened with TST; those with latent TB must be treated to prevent progression. The spin-off is in getting annual data on ARTI to track the trajectory of decline. A yearly 5% reduction of ARTI is achievable. In 20 years we can be on a par with western Europe in terms of infection incidence. Active TB will also decline, but more slowly.

To outsmart TB bacilli, we must intercept infection, progression and transmission. While TB bacilli are efficient in all three, our weapons against them are blunt. Our only chance of victory is by the concerted use of all interventions — biomedical and socio-behavioural. There is no glamour in this long-drawn-out battle.

Any further delay may convert a controllable disease into an uncontrollable one, because of increasing frequency of resistance to drugs against TB.

*T. Jacob John is retired professor of Clinical Virology, Christian Medical College, Vellore. Shobha Varthaman is a volunteer with Doctors without Borders and Operation Smile*

The India-Japan economic relationship remains underwhelming in relation to strategic ties

END

Downloaded from [crackIAS.com](http://crackIAS.com)

© **Zuccess App** by crackIAS.com