Turning the tables on TB

Tuberculosis (TB) is the leading infectious cause of deaths worldwide. Over the last few decades, the emergence of TB strains that are resistant to first-line medication has alarmed doctors and public health experts. Some forms of drug-resistance — especially to the two first-line drugs (referred to as multidrug-resistant TB or MDR-TB) — require a longer duration of therapy that is more expensive and toxic. Therefore, MDR-TB and other advanced forms of drug resistance have the potential to undermine global TB elimination efforts. These concerns are particularly relevant for India which has the world's largest TB epidemic and the largest number of individuals with MDR-TB.

On World TB Day this year (March 24), the Government of India released the country's first national TB drug-resistance survey— an important effort that substantially advances our understanding of the epidemic. It found that 6% of patients seeking care in the government sector have MDR-TB; this includes 3% of patients diagnosed with TB for the first time and 12% of patients with a prior history of TB treatment. Recent modelling studies predict that the percentage of patients with MDR-TB in India is only likely to rise over the next two decades.

As of 2013, the outcomes of patients with MDR-TB in the government TB programme were dismal. Of the 61,000 patients estimated to have reached government diagnostic centres that year, 14% were successfully diagnosed and have completed therapy. To its credit, since 2013, the government has made efforts to improve diagnosis and treatment of such patients. The findings of the survey highlight an urgent need to accelerate these efforts.

Drug susceptibility testing (DST) is used to determine if a patient has MDR-TB, thereby enabling prompt diagnosis and treatment. In previous years, the government had restricted use of DST to patients at higher risk for MDR-TB (those with a history of TB treatment). As a result, patients diagnosed with TB for the first time had to fail the first-line regimen before being screened with DST, resulting in prolonged delays in diagnosis. Last year, the government introduced universal DST in 19 States. It needs to be rapidly rolled out in the States with the highest TB burden if there is to be a meaningful impact in India's MDR-TB epidemic.

Further, strict adherence to medication can lower the chances of developing drug resistance and reduce TB deaths. Improving pill-taking by patients, however, is easier said than done. The MDR-TB drug regimen is demanding and can have severe side-effects (loss of appetite and hearing loss) if patients are not closely monitored. Enhanced counselling and access to patient support groups may help patients stick to their treatment. In addition, innovative treatment-monitoring technologies such as digital pillboxes may assist in improving patient outcomes.

Engaging the private sector

While the national drug resistance survey was a laudable effort, the findings of the survey are limited by the fact that it was conducted using a sample of a little over 5,000 patients from the public sector. This is a significant shortcoming as about 50% to 60% of patients in India are being treated in the private sector. Recent studies have found very poor quality of TB care in the private sector. It is quite common for patients to first consult a private or informal health-care provider when they develop symptoms, and initial contact with a private provider which has been shown to increase delays in diagnosis. Also, patients often do not have access to support systems that are in place in the public health system and as a result are more likely to default on their treatment. Engaging with the private sector is therefore crucial to address the challenge of drug resistant TB (DR-TB). Innovative models for private sector engagement in Mumbai, Patna (Bihar), and Mehsana (Gujarat) have proven to be successful in connecting with large numbers of private

providers and increasing notifications to the TB programme. These models can serve as a starting point for conducting a drug resistance survey in the private sector and extending universal DST to the private sector.

While the government is employing some of these strategies, the pace and scale of implementation have been slower and smaller than will be needed to turn the tables on DR-TB.

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