

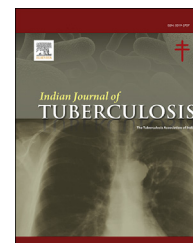


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## Viewpoint

# Care of tuberculosis patients in the times of COVID-19

Sudheer Tale\*, Pahel Meitei Soibam

Department of Pulmonary Medicine, AIIMS, Rishikesh, India

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## ABSTRACT

Globally during this time of Covid-19 pandemic health care services are overwhelmed and it has negative impact on other diseases like Tuberculosis (TB). High TB burden countries like India despite being faced by several other problems in present times, is continuously trying to provide uninterrupted services to TB patients through the national programs. In this general perspective we have shared our opinion on problems faced by TB patients in the times of covid-19

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First reported in China, the Covid 19 Pandemic now affects the whole world. As on May 31, 2020 there are more than 5,934,936 laboratory confirmed cases globally and with 3,67,166 deaths reported thus far.<sup>1</sup> This COVID 19 pandemic has affected virtually all aspects of care of non-Covid 19 patients, including patients with tuberculosis. Out of fear and because of forced restrictions on movement for non-emergency cases, many patients with tuberculosis do not step out of homes. To top it, a large number of people in the lower economic strata have lost their means of livelihood.

According to global TB report 2019 by World Health Organization (WHO), there were 10 million new tuberculosis cases globally in the year 2018, out of which 27% was contributed by India. Globally, there were 5 lakhs cases of DR-TB and out of which 27% was contributed by India. A total of 4.1 lakhs people died in India of tuberculosis in 2018 as per WHO.<sup>2</sup> To decrease the magnitude of disease burden in the country and hence a serious intent of the Government of India to eradicate the disease were both borne out by the change in the name of

RNTCP (Revised National Tuberculosis Control Program) to NTEP (National Tuberculosis Elimination Program) on 1st of January 2020.

The Covid 19 pandemic, however, poses many challenges to the nation's endeavor for elimination of tuberculosis. First, follow up and care of the patients already on Anti-Tubercular Treatment (ATT) are compromised with. Because of the restricted movement imposed, timely management of drug related adverse events is being hampered and it may lead to adverse health consequences including death or patients may stop the treatment on their own. Secondly, mortality among patients with tuberculosis is also likely to be higher since COVID 19 disease is likely to take a more severe course in this group of patients, who, on top of their compromised lungs, happen to be chronically debilitated and malnourished. Third, the chaotic interstate reverse migration of laborers to their native places with the perils of transit and quarantine on one hand, and resultant lack of timely access to follow up or emergency facilities are a problem compounded by the

\* Corresponding author. Tel.: +8872156777.

E-mail address: [drtalesudheer@gmail.com](mailto:drtalesudheer@gmail.com) (S. Tale).

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curtailment of health care services not related to Covid 19. It is likely to result in a huge surge in the number of treatment defaulters. It will result in the short term increase the death rate among patients with tuberculosis. On a longer term, it will lead to emergence of Multi drug resistant (MDR) tuberculosis. Fourth, detection rate of new TB cases will be reduced as patients don't report to health care facility due to fear of Covid-19 and as laboratory services for detection tuberculosis have been curtailed. This means delayed treatment, and more open cases of pulmonary tuberculosis who can infect other people in their family and community. Fifth, the number of untreated active cases will be multiplied because of the double whammy of increased open cases and decreased detection rate of new cases with additional increase in TB deaths in near future.<sup>3</sup>

While it is the collective responsibility of the Government, the health administrators and healthcare providers to ensure that all efforts are in place for continued pursuance of the goals of NTEP, we need to particularly emphasize how individual hospitals and the NTEP network can adapt to the goals of NTEP in these challenging times.

Hospitals can make exceptional provisions for continued testing of samples for tuberculosis detection, and for continued care either through telemedicine or through emergency medical services. District Tuberculosis Officers (DTOs) under NTEP can ensure that extra supply of ATT is given to migrant patients to cover the transit and quarantine periods as well. Registrations can be transferred to the nearest Directly observed treatment, short-course (DOTS) center of the respective native places of the patients to ensure continuity of treatment. The entire NTEP network can be adequately sensitized to ensure that release and receipt of registration of patients at the DOTS Centers under them happen without undue hassles to the patients and those patients currently on treatment are actively traced and encouraged to continue taking the treatment. The DTOs can ensure that patients registered with the various DOTS centers are contacted through calls or phone messages with clear instructions to get an extra supply of antitubercular drugs if they are going back to their native places, not to stop taking treatment and to take further supply of ATT from the DOTS centers to which their registrations have been transferred. Provisions can be made to allow patient's relatives to collect antitubercular medications from the DOTS centers with proper identity verification. Offices of the DTOs can consider opening telemedicine helplines for catering to the needs of patients with tuberculosis. For already diagnosed drug sensitive tuberculosis patients, interim policy can be formulated whereby the TB Health Visitor (TBHV) or DOTS provider will give full course of 4 drugs (H/R/Z/E) for intensive phase (IP) at a time to the patient and they can be advised to report to the nearest DOTS center after 2 months for assessment of clinical condition and for switch-over to the continuation phase (4 months of H/R/E). Meanwhile, if there is any clinical deterioration of health condition or drug related adverse effects, patients can be guided accordingly through telemedicine run by the DTOs' Offices or the nearest Hospital.

As we are moving towards an injection free regimen for treatment of MDR-TB patients, these patients can also be

provided with MDR-TB treatment refills to align with scheduled clinical visits at the health facility. Patients already on or starting an all oral DR-TB regimen and on linezolid should be enquired about side effects like neuropathy and intensive monitoring of the complete blood counts (CBC) should be done in the first 2 months of treatment. Patients can consult their respective DOTS center or a nearby health care facility by telemedicine if they have any untoward side effects. An MDR-TB patient can be monitored monthly during the intensive phase (IP) through telemedicine by TBHV from the nearest DOTS center or DTO Office. He/she can come to nearest DOTS Center at the end of IP for clinical assessment, sputum examination and switch-over to continuation phase (CP). Smear, culture and other genotypic tests like CBNAAT and Line Probe Assay (LPA) can be done from the nearest Government facility or from there can be transported to DTU if the patient smear is positive at the end of IP. As noted above, telephonic counseling remains critical in these groups of patients for successful completion of treatment. In the current situation, the importance of all oral drug regimens is all the more evident since access to healthcare personnel in the vicinity of the patient is going to be more limited than before.

If any DS or MDR-TB patient acquires COVID 19 infection, treatment of TB should be continued along with other supportive management. Importantly, the physician treating COVID 19 and MDR-TB co-infections should be aware of the potential side effects of the drugs in MDR regimen like QT prolongation since drugs like hydroxychloroquine used in the treatment of COVID 19 can cause further QT prolongation and lead to fatal cardiac arrhythmias.<sup>4</sup> Finally, all TB patients should be educated about COVID 19 precaution measures like hand washing, wearing a mask, maintaining social distancing and finally good nutrition and adherence to their treatment regimen. These short-term measures may be more labor and resource intensive. However, the long term gains in our fight to eliminate tuberculosis will be immense. Or else, we may end up losing the previous gains NTEP has so far achieved.

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## Conflicts of interest

All authors have none to declare.

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