VIEW POINT

Integrating Indian Post and National Tuberculosis Elimination Program - A new way ahead

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SUMMARY

COVID-19 and its response have a significant influence on healthcare services throughout the world and are likely to put the National Tuberculosis Elimination Program (NTEP) under immense pressure. Mitigation actions taken by the government to prevent the spread of infection have led to missed diagnoses and a halt in services such as active case finding, contact tracing, and follow-ups. Diagnostic delays have created a gap in the TB care chain, increasing mortality rates and morbidity, and can worsen the disease burden in marginalized communities. Closing these gaps requires intervention at the population and government levels. Integrating the Indian Post with the National Tuberculosis Elimination Program will be a milestone in the specimen transport system and will ultimately result in better diagnosis and treatment of Tuberculosis.

COVID-19 AND DIAGNOSTIC DELAYS

COVID-19 and its response impacted global health services, resulting in major pressure on the National Tuberculosis Elimination Program. Models project that disruptions in access to TB care due to COVID-19 will add half a million additional deaths worldwide to TB, specifically TB mortality, in the near future. (1,2)

This projected increase is mainly due to mitigation actions taken by the government to prevent the spread of infection, leading to rampant delays in diagnosis and treatment and halt in services such as active case finding, contact tracing, and follow-ups (3). Not only the relocation of services and the associated response towards COVID-19 are likely to disrupt laboratory diagnostic services, but also lock-downs and new working requirements such as physical distancing and working remotely have created a new challenge that has arisen, that is, safe transportation of sputum specimens to designated laboratories.

To effectively control TB, the disease must be detected early and treated successfully. As a result of a delayed diagnosis, the disease might be in a more advanced stage when it is finally discovered, which can lead to serious long-term complications and death; TB patients, even before the onset of COVID-19, were unable to receive treatment in large numbers, and there are many factors that influence the time it takes for a diagnosis and treatment to begin, including the distance between the patient's home and the health facility.

INDIAN POST AND SAFE SPECIMEN TRANSPORTATION.

72% of India's population resides in rural areas, but rural India has only one-fourth of the doctors and diagnostic facilities as compared to urban areas (4). For decades, healthcare workers and sometimes even patients had to transport TB specimens to nearby laboratories situated in nearby areas, and physical distance plays an important role in patients' access to health centers (5). Many TB patients could not get a proper diagnosis and treatment because these specimens could not be transferred securely and with quality assurance. With the COVID-19 effect, the problem of transportation of specimens has caught the attention of

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authorities. Rural populations living far away from the microscopy centers were further isolated from TB care and diagnosis. To address this bottleneck, we must advance the transportation system for the samples.

The TB care cascade should include a dependable and fast specimen transport service to achieve an accurate diagnosis and timely treatment. A well-integrated specimen transport system is a cost-effective way to improve diagnostic access in places where testing is currently unavailable. As a result, patients are less likely to travel, resulting in more fairness in TB diagnosis and treatment. Transporting specimens are typically less expensive than hiring extra people or purchasing new equipment to conduct localized testing. (6)

A collaboration between Indian Postal Services (IPS) and the National Tuberculosis Elimination Program (NTEP) seems to address this neglected issue. Postal services or Indian posts are run by the Indian government and have the largest postal network in the world, with approximately 1.55 lakh post offices nationwide, of which 1.4 lakh (89.9%) are in rural areas. By using the Indian Post's stellar logistics and network, the National Tuberculosis Program can achieve its goal at a much faster pace.

Creating a specific specimen transport system that provides universal access to the rapid diagnosis of TB, maintaining specimen quality while respecting the timeline is a challenge. Countries such as Zimbabwe and Tajikistan, which are developing countries, have begun to work with health programs such as HIV and TB to develop integrated specimen transportation systems. (6)

In Mali, Kassambara conducted a pilot study to determine the efficacy (i.e., timeliness, specimen quality, and cost) of utilizing a trained postal service to carry samples from the district to the central level. Postal service intervention took place in three areas from mid-2016 to mid-2017. The findings of the study confirmed that postal services are a viable alternative mode of transportation, and a potentially essential partner that the Malian Ministry of Health should explore for quick and secure specimen transfer. Extending collaboration with the Postal Service might help reduce delays and speed up the delivery of laboratory results. In this study, it was demonstrated that unusual stakeholders play an important role in circumventing specimen transportation system constraints. (8)

Another study conducted in Burkina Faso showed that efficient specimen transport systems are essential for strengthening laboratory systems. The study engaged the national postal service to transfer specimens from Severe Acute Respiratory Illness (SARI) locations to the influenza national reference laboratory. The findings revealed that Burkina Faso's newly installed specimen transport system could reliably deliver SARI surveillance specimens in excellent condition to the National Reference Laboratory (NRL) within 24 to 48 hours, from anywhere in Burkina Faso, with no packages lost. In addition, postal services are used to deliver tuberculosis (TB) and HIV specimens in Uganda and Ethiopia, where the system has built on a public-private partnership, ensuring optimal and fast access to diagnostic services. (9)

The states of Delhi, Uttar Pradesh, and Telangana launched pilot programs for transporting specimens through Indian post offices. To create an efficient specimen transportation system, this needs to be performed on a larger scale. (10)

The diagnostic capability of a healthcare system is a critical component of achieving universal health coverage (UHC), despite the fact that it is the weakest link in the system. There are large gaps in the diagnosis of tuberculosis, leaving many undiagnosed (11). Furthermore, gaps in diagnostic testing occurred for COVID-19, possibly due to mobility restrictions, lockdowns, a lack of healthcare workers, insufficient awareness regarding TB diagnostic tests, and insufficient infrastructure. Involvement of private healthcare institutions in TB control (12). In order to close these gaps in the care cascade, interventions might be required at the population or health system levels, the TB diagnostic and treatment facilities, and the patient-health provider level. (13)

Having, Indian Postal Services and the National Tuberculosis Elimination Program work together to collect specimens, transport samples and deliver drugs will be a cost-effective option for early diagnosis and treatment of TB. A transportation system for collected specimens will save patients' time and money from travelling to the lab. Patients with tuberculosis will be better managed, and disease transmission will be minimized if specimens are transported quickly and tested effectively.

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