

Drones move TB samples, cut diagnosis costs from ₹9,451 to ₹91 in new ICMR trial

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A drone flight costing patients almost nothing could replace journeys that once left suspected tuberculosis (TB) patients spending an average of ₹9,451 out of their own pockets. A study by the All India Institute of Medical Sciences, Bibinagar, in Telangana has found that transporting sputum samples by drone reduced patients' average expenditure to just ₹91 while cutting diagnosis time from 15 days to five days.

The study, published in the *International Journal of Tuberculosis and Lung Disease* evaluated the impact of using drones to transport sputum samples



The drone programme aims to streamline the transport of sputum samples from PHCs in remote areas to testing facilities. FILE PHOTO

from remote villages to TB testing centres in Yadadri Bhuvanagiri district under the Indian Council of Medical Research's (ICMR) i-DRONE initiative. The study analysed data from 840 participants.

Before the intervention,

suspected TB patients from remote villages, often located 10 km to 30 km from the nearest diagnostic centre, had to travel over poor roads with limited public transport to access testing facilities. During the drone phase, patients

only needed to visit their nearest PHC or subcentre, where trained healthcare workers collected and securely packaged sputum samples before drones transported them to the designated TB facilities.

The average out-of-pocket expenditure for patients, including medical expenses, travel, food and wage loss for both patients and attendants, dropped from ₹9,451 to ₹90.9. The intervention also improved reporting times. Before drones were introduced, over 92% of patients waited more than two days to receive their test results.

During the drone phase, 76.3% received results the next day, while only 16.3% experienced delays beyond two days.