

Prioritizing Tuberculosis Surveillance through Case-Based Health Facility Contact Analysis: Evidence from a Tribal District in Eastern India

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Abstract:

Purpose of the Study: Early TB diagnosis may be delayed when people visit several healthcare providers before testing and treatment. Routine TB surveillance mainly records the facility where TB is diagnosed. It gives limited information about earlier missed opportunities. This study assessed Health Facility Contact Analysis (HFCA) as a case-based approach to identify facilities that need focused TB programme action.

Research Methodology: A cross-sectional operational research study was conducted among 314 notified persons with TB in Jhargram, a tribal-dominated district of eastern India, from April 2025 to March 2026. Primary data were collected using a pre-tested semi-structured questionnaire. These data were linked with records from the national TB surveillance system. Symptom onset, healthcare visits, TB testing, referrals, and the diagnosing facility were recorded and analysed.

Key Findings: The 314 participants visited 267 different healthcare facilities before diagnosis. Of these, 184 were public and 83 were private. The median number of facilities visited was three. Private facilities were the first point of care for 52% of participants. Only 113 (36%) were diagnosed at the first visit. HFCA identified 40 public and 34 private facilities where at least one subsequently notified TB patient had a missed diagnostic opportunity.

Significance/Implications: HFCA provides a simple, data-based way to identify facilities that need focused supervision, training, and case-finding support. Adding HFCA to routine TB surveillance may improve public-private coordination, early diagnosis, and surveillance performance.

Keywords:

Tuberculosis surveillance, health facility contact analysis, TB case detection, health-seeking pattern, case reporting network.