MULTI-LEVEL INTERVENTIONS TO IMPROVE POST-TREATMENT FOLLOW-UP FOR TB FREE SURVIVAL

BACKGROUND

Patients who finish TB treatment remain at risk of experiencing a TB recurrence or death, partially reflecting the quality of care patients received throughout treatment. Undiagnosed drug resistance, medication non-adherence, and other clinical covariates are associated with increased recurrence risk. Even if recurrence or death is not observed, pulmonary TB survivors frequently experience structural and functional lung impairment. Approximately half of TB survivors experience some form of persistent pulmonary dysfunction despite microbiological cure, ranging from minor abnormalities and severe breathlessness to the development of chronic lung disease.\(^1\)

The National Tuberculosis Elimination Programme (NTEP) guidelines recommend follow-up of successfully treated TB patients at 6, 12, 18, & 24 months post-treatment. TB symptomatic patients must subsequently undergo diagnostic testing. However, no sub-optimal surveillance is currently conducted for post-treatment follow-up, and little is understood about post-treatment quality of life.

To address this challenge, the project ‘Closing the Gaps in TB Care Cascade (CGC)’ has implemented an intervention for post-treatment follow-up of successfully treated TB patients. Workflows, Key Results, and Early lessons learned from the intervention are described below.

INTERVENTION WORKFLOW

The workflow of post-treatment follow-up consists of five stages. It begins with a listing of eligible patients for follow-up; establishing contact telephonically or physically; recording history of recurrence; screening & referral for further diagnosis if the patient is presumptive; and initiation on TB treatment if diagnosed.

\(^1\) Tuberculosis and lung damage from epidemiology to pathophysiology Shruthi Ravi Mohan, Hardykorfd, Drewissman, Gregoryp. Bisson European Respiratory review 2018 27: 170077
RESULTS

During the implementation period of Oct 2020 - Sep 2021, 34,453 TB patients were successfully followed-up across intervals of 6, 12, 18, and 24 months post-treatment in 4 districts of Gujarat and 2 districts of Jharkhand. Overall recurrence was 4.3%, and post-treatment case fatality was 5.4%.

Recurrence and Case Fatality among Post-Treatment TB patients

Furthermore, a cohort of 5,463 patients followed-up subsequently on 6th, 12th, 18th and 24th months too. The TB recurrence among different cohorts was observed, for 6th Month among 4,113 patients reached, 151 (3.6%) TB recurrence patients were identified, similarly for 12th Month among 4,163 patients reached, 108 (2.6%) TB recurrence patients were identified and for 18th Month among 4,180 patients reached, 51 (1.3%) TB recurrence patients were identified respectively and lastly in the 24th month cohort, among the 3,741 patients reached 51 (1.4%) TB recurrence patients were identified respectively.

FOLLOW-UP FOR TB RECURRENCE AT 6TH, 12TH, 18TH AND 24TH MONTH POST THE TREATMENT OUTCOME
(Cumulative figures: starting from April 2021 - March 2023)
Way Forward

- Provide technical support to states for implementation
- Conduct death audit to assess causes of post-treatment case fatality

Scale-Up

National Training of Trainers (ToT) on Post-Treatment Follow-up (PTFU) of TB patients successfully concluded on May 17, 2023 in Delhi. The ToT attended by senior state health officials, policy makers, epidemiologist of 34 states and union territories (Uts).

Key Challenges and Lessons Learned

- The response rate via telephonic screening was >75%, among the patients with contact information available.
- 67% of recurrence and 74% of post-treatment case fatality occurred within the first 12 months.
- Post-treatment recurrence and case fatality was significantly associated with being male, above 30 yrs, microbiologically confirmed, retreatment, and DR-TB cases.
- 14% positivity among the symptomatic identified during the post-treatment follow-up.

Achievements/ Scale Up

- Completed Call-based (through Nikshay Sampark) pilot to reach out to more than 10,000 patients.
- Prepared an operational guidelines document and training materials for national scale-up.
- Activity scaled up to additional districts (Bokaro and Dhanbad in Jharkhand and Surat and Gandhinagar in Gujarat).
- Scale-up in Himachal Pradesh with the support of the project team.
- PTFU feature is developed Nikshay along with the report and dashboard to monitor it.
- Provided capacity building support to more than ten states for implementation.
- Conducted a verbal autopsy of TB patients to assess causes of post-treatment fatality.
- Organized a consultative workshop to disseminate the learnings.
World Health Partners (WHP) is a non-profit Indian society that sets up programs to bring sustainable healthcare within easy access to underserved and vulnerable communities. It innovatively harnesses already available resources more efficiently by using evidence-based management and technological solutions. WHP is best known for its programs focused on early detection and treatment of tuberculosis in urban and rural settings supported by community-based activities to ensure prevention. The organization uses all available resources - both in the public and private sectors to ensure that people living in any part of the country will have access to high-quality treatment.

For more information, please contact: Ms. Prachi Shukla, Country Director, World Health Partners (WHP), A 151, Block A, Sector - 72, Noida - 201301, India, info@whpindia.org

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ABOUT THE CGC PROJECT

Closing the gaps in TB Care Cascade (CGC) is a four-year (2020-2024) project funded by United States Agency for International Development (USAID) and is being implemented by World Health Partners (WHP) in four districts- Ranchi & East Singhbhum (Jharkhand) and Surat & Gandhi Nagar (Gujarat). The project will be further scaled-up to additional five states – Bihar, Uttar Pradesh, Sikkim, Punjab and Himachal Pradesh.

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**METHODOLOGY FRAMEWORKS**

Interdisciplinary approaches to address care gaps

<table>
<thead>
<tr>
<th>TB epidemiology</th>
<th>Behavioral design</th>
</tr>
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<tr>
<td>Micro-experiments</td>
<td>Digital learning</td>
</tr>
<tr>
<td>Technology Infrastructure (Nikshay)</td>
<td>Value-based care</td>
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**Closing the gaps in TB care cascade**

- **Gap 1:** Did not access a TB diagnostic test
- **Gap 2:** Did not get diagnosed
- **Gap 3:** Did not get registered in treatment
- **Gap 4:** Did not achieve treatment success
- **Gap 5:** Experienced post-treatment TB recurrence or death

- **Step 1:** Individuals with incident TB (100%)
- **Step 2:** Accessed TB tests (68%)
- **Step 3:** Diagnosed with TB (57%)
- **Step 4:** Registered in treatment (50%)
- **Step 5:** Treatment success (43%)
- **Step 6:** Recurrence-free survival (37%)