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TOWARDS TB ELIMINATION: FINDINGS FROM A GRADING AND SURVEILLANCE SURVEY IN SULLIA TALUK, KARNATAKA, UNDER THE TB MUKT BHARAT ABHIYAAN 2026

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ABSTRACT Tuberculosis (TB) remains a critical public health challenge in India, which bears 26% of the global TB burden. India has pledged to eliminate TB by 2025, five years ahead of the United Nations Sustainable Development Goal target of 2030. The TB Mukt Bharat Abhiyaan, a flagship national initiative, employs a decentralised Gram Panchayat (GP)-level grading framework to monitor progress toward elimination. This cross-sectional grading and surveillance survey was conducted across 10 Gram Panchayats in Sullia Taluk, Dakshina Kannada, Karnataka, during January–February 2026 as part of the TB Mukt Bharat Abhiyaan 2026 monitoring cycle. The study assessed six programmatic indicators — presumptive TB examination rate, TB notification rate, treatment success rate, Drug Susceptibility Testing (DST) coverage, Nikshay Poshan Yojana enrolment, and nutritional-support linkages — alongside TB-Free panchayat declaration status. Data from the Nikshay portal were triangulated with physical records and supplemented by six Focus Group Discussions and five Key Informant Interviews. Findings revealed that most panchayats (7–8 of 10) achieved 100% performance across treatment success, DST, and nutritional-support indicators. However, two panchayats Peruwaje and Nelluru showed comprehensive non-engagement across all outcome indicators, signaling an urgent need for intensified surveillance and active case-finding. Notably, all 10 panchayats met eligibility criteria for TB-Free declaration, yet none had been formally declared TB-Free for 2023 or 2024, representing a critical administrative gap. These findings underscore the need to strengthen data systems, community engagement, and certification processes to translate programmatic eligibility into tangible elimination outcomes.

KEYWORDS : Tuberculosis Elimination ;NTEP; Gram Panchayat ; Nikshay Surveillance

INTRODUCTION

Tuberculosis (TB) continues to represent one of the most formidable public health challenges faced by the nation, which accounts for nearly a quarter of the world's estimated TB burden (26%), with approximately 2.8 million incident cases reported annually. [1] Despite sustained implementation of the National Tuberculosis Elimination Programme (NTEP), economically vulnerable and marginalised communities continue to bear a disproportionate share of the disease burden.

The Government of India has pledged to eliminate TB by 2025, five years ahead of the United Nations Sustainable Development Goal (SDG) target of 2030[2] Achieving this ambitious goal requires a comprehensive approach encompassing early case detection, high-quality treatment delivery, contact investigation, preventive therapy for high-risk contacts, sustained social support, and real-time digital surveillance. The TB Mukt Bharat Abhiyaan was launched as a flagship initiative to operationalise this national commitment across all levels of the health system in India.

Gram Panchayats (Gps), the basic units of local self-governance in India, have recently been incorporated into this framework through systematic grading of defined TB elimination indicators.[3] This decentralised accountability mechanism embeds elimination efforts within the communities where transmission actually occurs, and creates structured motivation for frontline health workers, local administrative bodies, and community members to move collectively towards elimination.

Sullia, a taluk sub-division of Dakshina Kannada district, is predominantly rural, with geographically difficult terrain and scattered populations that include tribal and plantation communities. These characteristics pose operational challenges for NTEP implementation, including maintaining patient follow-up in remote habitations, overcoming limited health-seeking behaviour, and ensuring an uninterrupted supply of diagnostics and medicines to hard-to-reach areas.

The Nikshay portal, the Central TB Division's online case-surveillance platform, forms the backbone of TB elimination efforts, enabling real-time case notification, treatment tracking, and outcome monitoring.[4] The Nikshay Poshan Yojana (NPY) complements this by providing a direct benefit transfer of ₹1000 per month to all notified TB patients throughout treatment, aimed at improving nutritional status and reducing treatment abandonment due to socioeconomic hardship.[5,6]

This article presents the findings of a rapid grading and surveillance survey conducted across 10 Gram Panchayats in Sullia Taluk as part of the TB Mukt Bharat Abhiyaan 2026 monitoring cycle. The survey aimed to evaluate GP-level performance against national TB elimination indicators and to identify targeted areas for programmatic intervention.

METHODOLOGY

A cross-sectional, mixed-methods field study was conducted between January and February 2026 across ten Gram Panchayats in Sullia Taluk, Dakshina Kannada district, Karnataka. These panchayats, selected using a probability-proportionate-to-size sampling approach, represent both semi-urban settings and interior, hard-to-reach areas. The study combined quantitative assessment of TB programme indicators with qualitative exploration of implementation experiences and barriers (Figure 1).

Healthcare delivery infrastructure in the region includes Community Health Centres, Primary Health Centres, Health and Wellness Centres, and a private medical college teaching hospital. Designated Microscopy Centres and CBNAAT testing support early detection of tuberculosis under the NTEP.

Quantitative data collection involved on-site verification at PHCs and sub-centres of each Gram Panchayat. Data recorded on the Nikshay portal were compared against physical records, including TB registers and medication cards; discrepancies were resolved through consultation with Medical Officers and TB Health Visitors to ensure accuracy. The Gram Panchayats were selected as part of the routine TB Mukt Bharat Abhiyaan monitoring cycle and represent a programmatically defined sample.

Qualitative data collection comprised six Focus Group Discussions (FGDs) exploring community awareness, stigma, health-seeking behaviour, and experiences with TB services using semi-structured interview guides, and five Key Informant Interviews (KIIs) with healthcare providers and programme staff addressing socio-behavioural factors, NTEP operations, and implementation barriers. Each FGD lasted approximately 45–60 minutes and each KII 30–45 minutes; all discussions were conducted in Kannada and documented through detailed field notes during periodic team visits.

Qualitative data were analysed using thematic analysis. Field notes were reviewed manually, codes were generated inductively, and these were grouped into broader themes relating to community-level factors, programme implementation, and health system challenges. Qualitative findings were triangulated with quantitative results to strengthen the validity and comprehensiveness of the study.

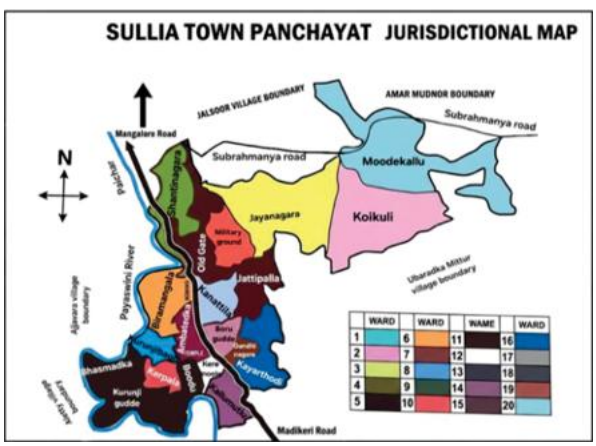

Figure 1: Map of Sullia Taluk Urban and Rural Catchment Population

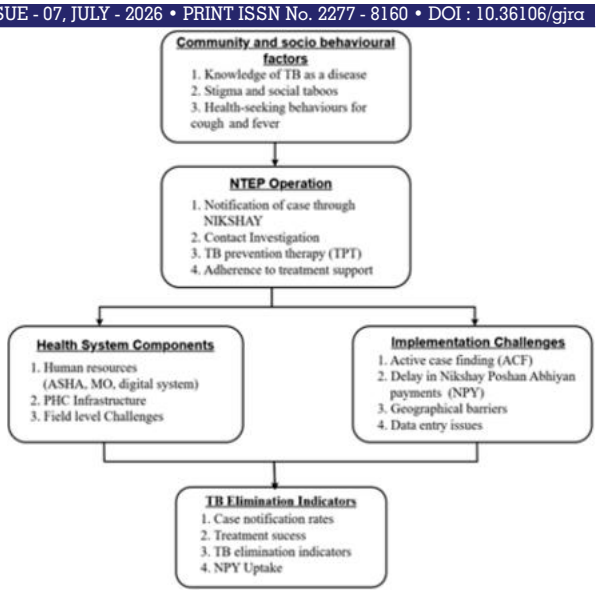

Figure 2: Flowchart Showing the NTEP Operational Overview

RESULTS

Overview of Surveyed Panchayats

Ten Gram Panchayats under Sullia Block, Dakshina Kannada district, with a combined population of approximately 36,140 persons (as stated in Fig 1) were assessed by the District TB Team as part of the TB Mukt Bharat Abhiyaan 2026 verification exercise. Data were captured across six operational indicators used for TB-Free panchayat grading, alongside eligibility and declaration status for 2023 and 2024 (Table 1). The verification team comprised Dr. Neeharika (NTEP DMO, KVS/DH Sullia), Dr. Saurish Hegde (Assistant Professor, KVG Medical College, Sullia), and Mr. Lokesh (District TB Supervisor), with supporting oversight from district health officials.

Panchayat-wise Indicator Performance

Table 1: Panchayat-wise TB Mukt Bharat Abhiyaan indicator data — Sullia Block, 2026. DST = Drug Susceptibility Testing; Ind. = Indicator; Figures in Parentheses Denote Rates Per 1,000 Population.

S. N.	Pan-chayat	Popu-lation	Presump-tive TB/1000 (Ind.1)	TB Notif./ 1000 (Ind. 2)	Tx Succ ess % (Ind. 3)	DST % (Ind. 4)	NPY % (Ind. 5)	Nutri-tion % (Ind. 6)
1	Markanja	3436	183 (53)	2 (0.58)	100	100	100	100
2	Aletty	8229	407 (49)	7 (0.85)	0	100	100	100
3	Mandekolu	3609	322 (89)	4 (1.0)	100	100	100	100
4	Kalanja	2154	129 (60)	1 (0.46)	100	100	100	100
5	Kodiyala	2314	101 (44)	1 (0.43)	100	100	100	100
6	Peruwaje	3011	119 (40)	0	0	0	0	0
7	Aivarnadu	4814	239 (46.7)	1 (0.2)	100	100	100	100
8	Kanakama jalu	2425	141 (58)	2 (0.82)	100	100	100	100
9	Guthigaru	6736	552 (82)	2 (0.29)	100	100	100	0
10	Nelluru	2848	104 (37)	0	0	0	0	0

Indicator-wise Findings

Presumptive TB examination rates varied from 37 per 1,000 population in Nelluru to 89 per 1,000 in Mandekolu, with a median of approximately 53 per 1,000 across all panchayats

— indicating reasonably active community screening overall. Guthigaru (82/1,000) and Aivarnadu (46.7/1,000) also reflected substantial screening effort.

TB notification rates were uniformly low, consistent with the low-burden aspirations of the programme, ranging from 0 to 1.0 per 1,000 population (Figure 2). Aletty recorded the highest rate (0.85/1,000; 7 cases among 8,229 persons), followed by Mandekolu (1.0/1,000; 4 cases) and Markanja (0.58/1,000). Peruwaje and Nelluru reported zero notifications during the assessment period, which may reflect either genuinely low transmission or under-detection warranting further surveillance.

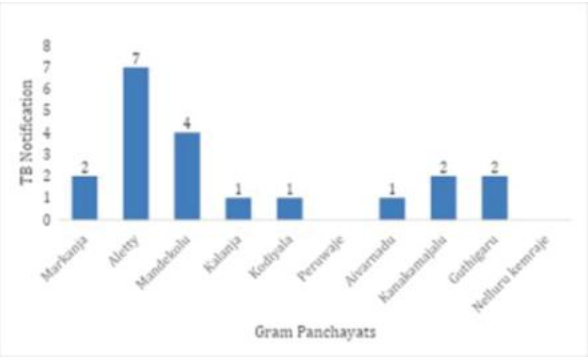

Figure 2: TB Notification Rate (Per 1,000 Population) by Gram Panchayat

Seven of ten panchayats — Markanja, Mandekolu, Kalanja, Kodiyala, Aivarnadu, Kanakamajalu, and Guthigaru — achieved a Treatment Success Rate of 100%, a commendable outcome reflecting strong patient management under the Directly Observed Treatment Short-course (DOTS) strategy (Figure 3). Aletty recorded 0%, annotated as having no eligible outcome cohort in the review period; Peruwaje recorded 0% with a note of non-submission of data to the verification team; and Nelluru recorded 0%, warranting follow-up to determine whether this reflects missing data or genuinely poor outcomes.

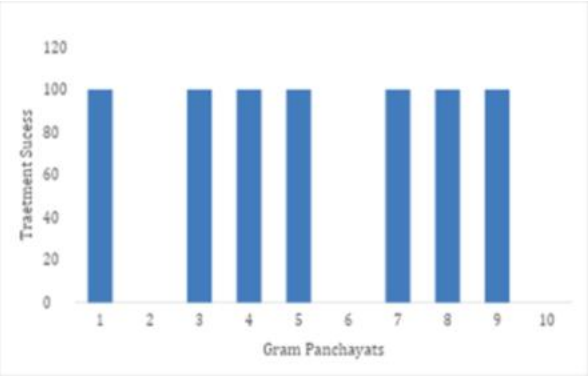

Figure 3: Treatment Success Rate (%) by Gram Panchayat

Eight panchayats achieved 100% DST coverage, reflecting robust compliance with Universal Drug Susceptibility Testing (UDST) guidelines under the NTEP. Peruwaje and Nelluru recorded 0% DST coverage — a critical gap, since failure to test for drug resistance jeopardises detection of drug-resistant TB and has direct implications for treatment outcomes and community transmission.

Eight panchayats reported 100% enrolment under the Ni-Kshay Poshan Yojana (Figure 4), the Government of India's direct-benefit-transfer scheme providing ₹1000 per month in nutritional support to notified TB patients. Peruwaje and Nelluru again recorded 0% enrolment, consistent with their overall pattern of non-engagement across outcome indicators.

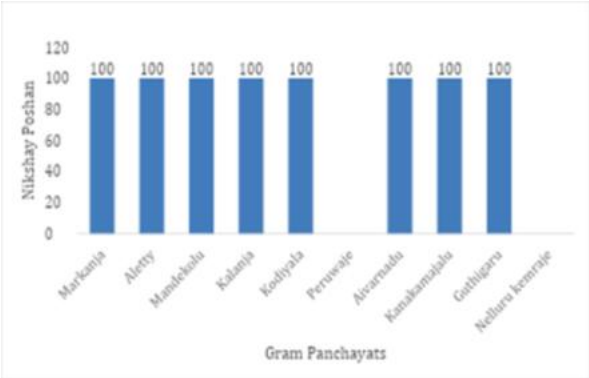

Figure 4: Nikshay Poshan Yojana Enrolment (%) by Gram Panchayat

Nutritional support under the Pradhan Mantri TB Mukt Bharat Abhiyaan (PM-TBMBA) — additional support from Nikshaya Mitras or community contributors — was achieved at 100% in seven panchayats. Guthigaru, Peruwaje, and Nelluru reported 0% coverage. The gap in Guthigaru, which otherwise performed well across all other indicators, appears to reflect the absence of a community-level Nikshaya Mitra linkage rather than a systemic programme failure, whereas Peruwaje and Nelluru continued to show comprehensive non-engagement with programme activities.

Thematic Findings from FGDs and KIIs

Thematic analysis identified four major domains (Table 2): community and socio-behavioural factors — including incomplete awareness of TB curability, stigma-driven concealment of illness, delayed care-seeking among daily-wage workers, and a preference for initial consultation with private providers; health system components — including strong ASHA-led follow-up support, adherence barriers linked to migration and financial hardship, good contact-tracing coverage with occasional TPT data-entry delays, and variable community participation in screening camps; Nikshay Poshan Yojana implementation — including limited beneficiary awareness of disbursement timing and payment delays linked to banking/Aadhaar issues; and health system and data management — including strong frontline worker dedication alongside delayed real-time Nikshay updates attributable to workload.

Table 2: Thematic Coding Framework From Focus Group Discussions and Key Informant Interviews (Condensed)

Major Theme	Subtheme	Description
Community & socio-behavioural factors	General awareness	Basic knowledge of TB symptoms present but incomplete understanding of curability
	Stigma & mis-conceptions	Fear of social isolation leads some patients to conceal illness
	Delayed health-seeking	Symptoms often ignored until they become severe, especially among daily-wage workers
	Preference for private care	Initial consultation frequently sought from informal/private providers before government centres
Health system components	Frontline worker support	Strong role of ASHA workers in patient follow-up and medication reminders
	Adherence barriers	Migration for work, medication side effects, and financial hardship drive discontinuation

	Contact investigation & TPT	Good coverage of contact tracing; occasional delays in updating TPT data on Nikshay
	Active case finding	Geographic and logistical barriers in reaching forest/remote habitations
	Community participation	Variable willingness to attend community screening camps
Nikshay Poshan Yojana (NPY)	Awareness of scheme	Beneficiaries aware of entitlement but uncertain of disbursement schedule
	Disbursement challenges	Payment delays linked to banking/Aadhaar-linking issues
Health system & data management	Frontline dedication	Strong commitment of frontline workers in patient tracking
	Data entry challenges	High workload leads to delayed real-time Nikshay data updates

TB-Free Panchayat Eligibility and Declaration Status

All 10 panchayats were assessed as eligible for TB-Free declaration based on the composite indicator framework. However, none of the panchayats had been officially declared TB-Free for 2023, and similarly none were declared TB-Free for 2024. This paradox — panchayats meeting eligibility criteria but not receiving formal declaration — underscores a critical implementation gap in the certification and advocacy process at the block and district level.

DISCUSSION

These findings, drawn from the TB Mukt Bharat Abhiyaan 2026 grading exercise in Sullia Taluk, reflect an overall encouraging trajectory towards TB elimination in this sub-district of Dakshina Kannada, while simultaneously exposing panchayat-level vulnerabilities that require targeted programmatic intervention.

The near-universal achievement of 100% Treatment Success Rates across most panchayats testifies to the sustained quality of DOTS delivery and the dedication of healthcare workers at sub-centre and primary health centre level. This is consistent with Karnataka's historically strong TB programme infrastructure and aligns with the National Strategic Plan (NSP) 2017–2025 target of a ≥90% treatment success rate.[7] Such outcomes are critical not only for individual patient welfare but also for interrupting community transmission.

The high coverage of NPY enrolment and near-complete DST rates are particularly noteworthy. Universal DST is a cornerstone of NTEP's strategy against drug-resistant TB, and the near-universal compliance observed in this survey suggests that frontline workers in Sullia Taluk have internalised UDST as standard practice.[8,9] Early detection of drug-resistant cases enables timely initiation of second-line treatment, reducing morbidity and preventing further community spread.

However, the performance of Peruwaje and Nelluru demands urgent attention, with both panchayats recording zero performance across Indicators 3–6. In Peruwaje, the annotations of non-submission suggest passive dis-engagement from the reporting framework rather than a genuine absence of cases. In Nelluru, despite a population of 2,848, the absence of TB notifications combined with zero performance across all outcome indicators raises the possibility of significant under-detection. Studies on TB epidemiology in India consistently identify undetected disease in community settings as a major barrier to elimination, and panchayats with no reported cases should be treated with heightened suspicion and subjected to intensified active case-finding activities.[10-12]

The notification rates observed — ranging from 0 to 1.0 per 1,000 population — are broadly in line with declining TB incidence trends in Karnataka over the past decade; however, notification rate alone cannot confirm low prevalence, as it may equally reflect sub-optimal case detection. The variable presumptive TB examination rates, lowest in Nelluru and highest in Mandekolu and Guthigaru, suggest differential intensity of active case-finding across panchayats that likely also shapes downstream notification.

The most programmatically significant finding is the paradox of universal TB-Free eligibility alongside a complete absence of formal declarations for 2023 and 2024. This gap may reflect administrative bottlenecks in the certification process, limited clarity among panchayat bodies regarding the declaration procedure, or insufficient advocacy by block-level health teams. Since panchayat-level advocacy is explicitly designated as a key strategy for community engagement and accountability under the TB Mukt Bharat Abhiyaan framework, the absence of formal declaration — even where criteria are met — dilutes the programme's community impact and forgoes an opportunity to build health governance at the grassroots level.

The nutritional-support gap observed in Guthigaru, despite strong performance on all other indicators, illustrates the distinct challenge of sustaining community-based Nikshaya Mitra linkages compared with the relatively simpler, direct-benefit-transfer-based NPY. Mobilising community donors may be harder to sustain in geographically dispersed and socioeconomically variable panchayats such as those in Sullia Taluk's hilly terrain.[13-15]

CONCLUSION

This grading and surveillance survey across 10 panchayats of Sullia Taluk under the TB Mukt Bharat Abhiyaan 2026 reveals broadly positive programmatic performance alongside critical localised gaps. The majority of panchayats demonstrated exemplary adherence to NTEP standards, with high treatment success rates, universal DST coverage, and full Nikshay Poshan Yojana enrolment, positioning Sullia Taluk as a credible model for sub-district-level TB elimination efforts in rural Karnataka.

However, the findings unequivocally show that two panchayats — Peruwaje and Nelluru — require immediate programmatic rescue through intensified active case-finding, data reconciliation, and re-engagement of the healthcare delivery chain. These panchayats should be prioritised for supervisory visits, microscopy-intensification camps, and targeted community sensitisation activities in the coming quarter.

The universal eligibility but complete absence of formal TB-Free declarations across all 10 panchayats constitutes the most actionable finding of this survey. It is strongly recommended that the District TB Officer and Block Medical Officer, Sullia, initiate an expedited certification drive in collaboration with the respective Gram Panchayat Presidents and Chief Officers, facilitated by the Nikshay Mitra network, to ensure that eligible panchayats are formally declared TB-Free within the 2026 programme cycle. Such declarations carry both epidemiological significance and community empowerment value, and their absence represents a missed opportunity in the national march towards TB elimination by 2025.

Ultimately, this survey affirms that the infrastructure and intent for TB elimination exist in Sullia Taluk. Closing the gaps in data submission, case detection, nutritional linkages, and

formal TB-Free declarations will be instrumental in translating operational eligibility into programmatic achievement, contributing to India's commitment to ending TB as a public health problem well ahead of the global SDG target of 2030.[10,15]

Declaration By Authors
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