

Aggressive scale-up of active case finding and treatment could be the best TB control strategy among Saharia Tribes, Madhya Pradesh

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Policy Brief

Summary

Though a very high tuberculosis (TB) burden has been reported among the Saharia - a Particularly Vulnerable Tribal Group (PVTG) in Madhya Pradesh, however, information on the impact of DOTS and other intervention measures implemented under the National Tuberculosis Elimination Programme (NTEP) in the area is limited. A community-based survey was conducted among the Saharia tribe in Shivpuri district's Pohri block, and it was repeated one year later in the same population. The findings show a decrease in TB prevalence in this tribe as a result of active case finding and the NTEP DOTS strategy. This study indicates that active case finding along with NTEP is definitely an effective tool for bringing about a change in the TB situation, even in the most impoverished settings.

Intervention

Active case-finding requires a systematic screening and clinical evaluation of persons who are at high risk of developing tuberculosis. In collaboration with NTEP, ICMR-NIRTH conducted a community survey, which was followed by systematic communications with local tribal leaders. Following sensitization, our trained field investigators conducted a house-to-house census, and household information was recorded on an individual card in a pre-coded format. A baseline survey was conducted among all individuals aged 15 and above to screen for symptoms suggestive of tuberculosis, such as coughing for two weeks, fever for one month, chest pain for one month, and a history of hemoptysis. Individuals who remained absent for symptom screening were revisited on the same day or on subsequent days until at least 90% coverage was achieved. Persons with any of these symptoms was considered chest symptomatic, and two sputum specimens were collected for smear and culture examination. Those who were diagnosed with tuberculosis received treatment as per NTEP guidelines.

The policy brief is based upon the prevalence surveys of pulmonary tuberculosis among Saharia, a Particularly Vulnerable Tribal Group in Madhya Pradesh, Central India.

Recommendations

- Active case findings with community engagement involving local tribal volunteers to improve service reach.
- Representatives from the tribal community should be considered for vacant positions in health care in order to improve communication.
- In addition to household surveys and repeat TB screening, contact tracing and examination of contacts should be done on a regular basis.
- Priority should be given to IEC activities aimed at empowering the population, as well as an emphasis on treatment completion, malnutrition correction, and counselling for the cessation of alcohol and tobacco use.
- It is necessary to conduct follow-up and surveillance activities on cases that have completed treatment.
- There is a need for NTEP to develop proper affordable housing in collaboration with the Ministry of Tribal Affairs in order to break the cycle of infection and improve overall health.

Background

The tribal population is a vulnerable group of people who live primarily in rural areas and have limited access to health-care services. It is estimated to be 104 million in India, accounting for approximately 8.6 percent of the total population.¹ According to a meta-analysis based on the few studies that were available, the pooled estimated prevalence of tuberculosis was 703 per 100,000 among tribal people and 320 per 100,000 among the general population of the country. The heterogeneity of the population studied in these studies, on the other hand, emphasizes the importance of assessing TB burden among different tribal groups. The extent of TB disease and its variations over time are good indicators of TB transmission and can be used to better understand TB control in the area.² However, due to difficulties in obtaining such data at the community level, relevant data is scarcely available in rural or tribal areas of the country.

Saharia is one of three tribal groups in the central Indian state of Madhya Pradesh that are being classified as particularly vulnerable tribal groups (PVTG). They are mostly agricultural labourers who live in hamlets near the main village. The living conditions are deplorable, with the majority of them living in single-room, poorly ventilated

Houses. All family members, including children, share the same room, causing overcrowding and the rapid spread of tuberculosis infection. Malnutrition, alcoholism, tobacco use, and smoking are among the most common risk factors. HIV, on the other hand, was not discovered to be a risk factor among them. The ICMR–National Institute of Research in Tribal Health (NIRTH) studies found a high prevalence of tuberculosis infection and disease.^{3,4} Jiwaji University in Gwalior and the ICMR-National JALMA Institute for Leprosy and Other Mycobacterial Diseases (NJILOMD) in Agra have also reported a high prevalence of tuberculosis (TB) among the Saharia tribe.⁵ In view of this, we conducted surveys at one-year interval to assess the impact of TB control measures implemented in this tribal group.

Key Messages

- High TB prevalence in Saharia tribe compared to National TB prevalence (3003 vs 320 per 100,000 population).
- Identified risks: Poor housing; Indoor air pollution; Undernutrition; Smoking and Alcoholism.
- The annual decline being 12.4% for culture positive and 12.2% for smear positive TB.
- Active case finding is a useful approach to reduce TB among disadvantaged population even in remote settings.

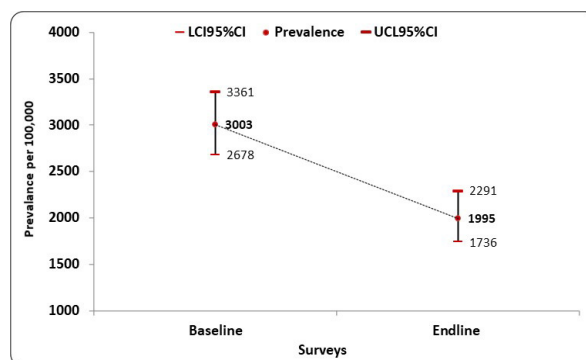
Policy Implications

This study found that active case finding can significantly reduce tuberculosis prevalence, especially when TB services are strengthened at the same time. It has also been illustrated that repeating active case finding in high burden settings, such as tribal populations, is more effective when integrated through the National Tuberculosis Elimination Programme (NTEP) involving the DOTS strategy. The current findings can be used to plan and implement appropriate intervention strategies to control tuberculosis in underserved communities. This is especially important in light of the NTEP's commitment to a 'TB-free India'.

Summary of Evidence

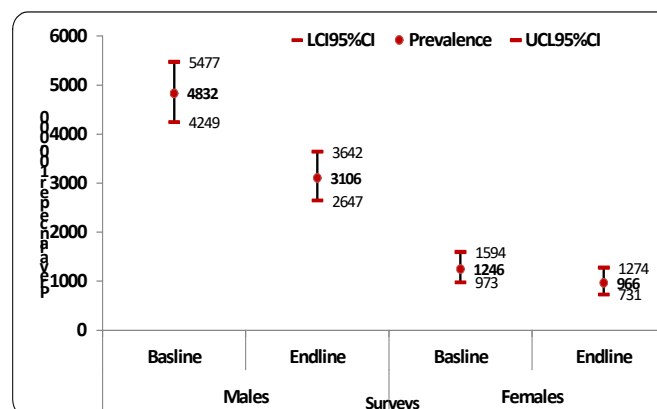
In the baseline (2012-2013) and end line (2014-2015) surveys, the prevalence of tuberculosis was found to be 3003 and 1995 per 100,000 population, respectively, and the reduction was significant (Chi square 19.97; OR=1.521; p0.000). Males had a higher prevalence in both surveys (baseline 4832 vs 1246; end line 3170 vs 906), and males had a significant reduction in prevalence (1661; 34.4 percent) compared to females (340; 27.3 percent). The decrease in TB prevalence in the follow-up survey highlights the importance of active case finding as one of the contributing factors in TB control.

TB prevalence in two different surveys



According to reports from other parts of the country, the prevalence of tuberculosis (TB) nearly halved in the first five years of DOTS implementation, with an annual decline of 12.6 percent for culture positive TB and 12.3 percent for smear positive TB.

TB prevalence by gender in two surveys



It concluded that the significant decreases observed were largely due to the implementation of the DOTS strategy under NTEP, in conjunction with efficient case-finding in the community.⁶ The current study's decreasing trend in TB prevalence is due to active case detection, as well as the study area's access to and availability of free DOTS through NTEP.

Conclusion

The current study's findings show a decrease in TB prevalence in the Saharia tribe as a result of active case finding under the NTEP. Door-to-door repeat TB screening could definitely be an effective tool for bringing about a change in the epidemiological situation. The findings suggest that an active screening strategy, even in remote settings, can be a useful approach to reducing tuberculosis among disadvantaged populations.

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