TUBERCULOSIS IN INDIA: CONSTITUTIONAL MANDATES, POLICY GAPS, AND THE ROAD TO ELIMINATION

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I. ABSTRACT

Tuberculosis (TB) is still India's most critical public health issue, with a very large share of the world's TB burden. Despite policies having been implemented over nearly five decades and diagnostic and treatment advances, India has not yet overcome the socio-economic and legal aspects of the disease. This paper discusses the nexus between tuberculosis control and constitutional and legal systems in India, exploring how public health policy is consonant with the basic rights enshrined under the Constitution, specifically Articles 14, 15, and 21. The research critically examines India's flagship programs like the Revised National Tuberculosis Control Programme (RNTCP) and its follow-up, the National Tuberculosis Elimination Programme (NTEP), against the backdrop of India's vision to end TB by 2025—five years before the global Sustainable Development Goal deadline.

The article examines the role of court judgments in establishing the right to health as a component of the right to life and examines international commitments under treaties such as the International Covenant on Economic, Social and Cultural Rights (ICESCR). Case studies such as rights-based interventions among migrant and tribal populations include observations on the ground level challenges of TB policy implementation. Particular attention is placed on the regulatory environment around distribution of TB medicines, compulsory case notification, and programs such as the Nikshay Poshan Yojana, intended to offer nutritional assistance to patients but that frequently disappoint on both delivery and punctuality.

Recurrent shortcomings in the legal and policy environment—stigma, discrimination, ignorance, and infrastructure hurdles—emphasize the requirement of a rights-based and inclusive strategy. The paper ends with the primary recommendations to meet the social determinants of TB, enhance community engagement, and increase legal accountability. Closing these systemic loops is crucial to fulfilling the constitutional promise of health and dignity for all and to translating the vision of a TB-free India into a concrete and feasible reality.

II. WHEN ILLNESS MEETS INEQUALITY: UNDERSTANDING TB THROUGH A CONSTITUTIONAL LENS

Tuberculosis (TB) remains a critical public health challenge in India, accounting for nearly a quarter of the global burden. Despite significant advances in diagnosis, treatment, and prevention, the disease continues to impact millions, particularly those from marginalized communities, including women, gender minorities, and economically disadvantaged populations. According to the **Global TB Report 2023** by the World Health Organization (WHO), recognised India as one of the highest TB-burden country globally.[1] Factors such as malnutrition, poor living conditions, and co-morbidities like HIV/AIDS contribute to the high prevalence. Moreover, multidrug-resistant TB (MDR-TB) poses a growing threat, with India accounting for a significant share of global MDR-TB cases.

India's approach to TB is governed by a combination of public health policies, constitutional provisions, and judicial pronouncements. The **Revised National Tuberculosis Control Program (RNTCP)**, now rebranded as the **National Tuberculosis Elimination Program (NTEP)**, has been pivotal in driving the fight against TB. The program aligns with the government's commitment to achieving a TB-free India by 2025, ahead of the global target of 2030 under the UN Sustainable Development Goals (SDGs).

A. Existing Legal and Policy Protections for TB Patients in India

India has implemented a range of policies and legal frameworks to combat TB, focusing on prevention, treatment, and the rights of affected individuals. These include:

B. National Strategic Plan (NSP) for Tuberculosis Elimination

The NSP (2017-2025) sets ambitious goals for eliminating TB by 2025, five years ahead of the global target. The plan prioritizes early diagnosis, universal access to treatment, and patient-centric care. It also incorporates social support schemes like nutritional assistance through Nikshay Poshan Yojana, offering financial incentives to TB patients. "The SDG target 3.3 aims to "End the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases, and combat hepatitis, water-borne diseases, and other communicable diseases by 2030." India, as

[1] World Health Organization, Global Tuberculosis Report 2023 48 (2023), https://iris.who.int/bitstream/handle/10665/373828/9789240083851-eng.pdf

a signatory to the United Nations Sustainable Development Goals (UN-SDGs), has pledged to achieve the "End TB" targets by 2025, five years ahead of the SDG deadline of 2030."[2]

C. Revised National Tuberculosis Control Programme (RNTCP)

Renamed as the National TB Elimination Programme (NTEP) in 2020, this initiative has expanded the availability of Directly Observed Treatment, Short-course (DOTS) services. The National Tuberculosis Elimination Programme is based on the daily DOTS (Directly Observed Treatment with short course chemotherapy) strategy.[3]

D. Provisions under the Constitution of India

Articles 14, 15, and 21 of the Indian Constitution guarantee equality, non-discrimination, and the right to life and health. These provisions implicitly protect TB patients, emphasizing access to healthcare without stigma or discrimination.

E. Promoting Legal Awareness

The stigma surrounding tuberculosis (TB) remains a significant barrier to timely diagnosis, treatment, and overall disease management in India. Misconceptions about TB being highly contagious, socially disgraceful, or a result of poor moral or hygienic behaviour often lead to the isolation of patients. Recognizing this, the Government of India has initiated several awareness campaigns aimed at reducing TB-related stigma, thereby encouraging patients to seek healthcare services without fear of discrimination.

F. TB Harega, Desh Jeetega Campaign

- This national-level campaign, launched under the National TB Elimination Programme (NTEP), focuses on spreading awareness about TB symptoms, diagnosis, and treatment. It emphasizes that TB is a curable disease and addresses misconceptions that lead to societal stigma. The campaign employs mass media platforms like television, radio, and social media to normalize conversations about TB and reduce stigma.

[2] Press Information Bureau, Towards a TB-Free India: Achievements, Challenges and the Way Forward (Nov. 5, 2024), https://pib.gov.in/PressReleaseIframePage.aspx?PRID=2070942 (last visited Dec. 30, 2024).
[3] National Health Mission, Uttarakhand, National Tuberculosis Elimination Programme, https://nhm.uk.gov.in/files/NTEP-All.pdf (last visited Dec. 30, 2024).

G. Gaps in Legal and Policy Protections

Despite the existing frameworks, significant gaps remain in protecting TB patients in India. These gaps exacerbate challenges related to the disease's medical, social, and economic dimensions.

H. Constitutional Provisions:

Under Article 21 of the Indian Constitution, the right to life includes the right to health. This has been reiterated by various judgments of the Supreme Court and High Courts, emphasizing the state's responsibility to provide adequate healthcare services.

Health is universally recognized as essential to the human condition. It has often been said that, "If you don't have your health, you don't have anything." An individual's health is directly related to the enjoyment of all other human rights, and is a precondition of full participation in social, political, and economic life. [4] Almost every culture has a proverb, So long as you have your health. All over the world, people rank health as one of the greatest goods. Yet when it comes to decision-making and priority-setting, health vanishes from the scene.[5]

India accounts for 27.4 Lakh of the 100 Lakh new tuberculosis cases globally, according to the WHO Global TB report 2018. India is a signatory to the WHO's 'The End TB Strategy' that calls for a world free of tuberculosis, with measurable aims of a 50% and 75% reduction in incidence and deaths, respectively by 2025, and corresponding reductions of 90% and 95% by 2035. Across the globe emergence of Multi-Drug Resistant (MDR) and Extensively Drug Resistance (XDR) TB is proving to be a challenge. World Health Organization (WHO) has quoted, if a country having 300 cases per one lakh population as annual overall TB incidence rate, out of this, 60 cases per year are expected among a workforce of 20,000 (WHO-ILO, 2003). It has been estimated, that a person with infectious diseases could infect about 20 different individuals during their lifetime (Qazi Shafayetul Islam, 2015). A workplace having 20,000 employees could be considered for establishing a Directly Observed Treatment, Short-

[4] Moran Ofir & Ido Sadeh, ICO vs. IPO: Empirical Findings, Information Asymmetry, and the Appropriate Regulatory Framework, 53 Vand. J. Transnat'l L. 525 (2020), https://scholarship.law.vanderbilt.edu/cgi/viewcontent.cgi?article=1756&context=vjtl (last visited Dec. 30, 2024).

[5] Jonathan Mann, Defining the Right to Adequate Health, in Economic and Social Rights and the Right to Health 17, 17 (1995).

course (DOTS) programme in collaboration with National Tuberculosis Programme (NTP) (WHO-ILO, 2003). [6]

III.HISTORY OF TB IN INDIA

India has been at the forefront of TB control and research since the start of the 20th century. The first open-air sanatorium was established in 1906 by a Christian organization in Tilounia, in the Ajmer district of the north Indian state of Rajasthan. In the following two decades, additional sanatoria, dispensaries and societies were established throughout the country.[7] The Bhore Committee, which was appointed by the Government of India in October 1943 to make a survey of the existing position in regard to health conditions and health organization in what was then known as British India and to make recommendations for future developments, found that they had to confine themselves mainly to statistics of ill-health and death, in the absence of data on positive health. Tuberculosis ranked high as a public health problem. The factors contributing to the spread of the disease were found to be malnutrition, under- nutrition and unhygienic conditions. The incidence of tuberculosis was believed to be higher in urban than in rural areas, although the infection was spreading throughout the country with the development of transport facilities and migration from villages to towns.[8]

IV. NATIONAL TUBERCULOSIS PROGRAMME

A District Tuberculosis Centre (DTC) was established in Annantapur district of Andhra Pradesh as a pilot project to control the spread of Tuberculosis in 1961. After this, it was launched in the entire country in the form of National Tuberculosis Programme in 1962. NTP primarily focused on the prevention of TB with the use of BCG vaccines along with domiciliary treatment for TB. After a combined review of the programme by the Government of India, WHO and Swedish International Development Agency (SIDA) in 1992, it was concluded that NTP had failed to control the spread of TB, as its diagnosis as well as the treatment rate was just 30%.[9] The Revised National Tuberculosis Control Programme (RNTCP), based on the

[6] Ministry of Labour & Employment, Government of India, Results Framework Document, https://labour.gov.in/sites/default/files/framework.pdf (last visited Dec. 30, 2024).
[7] S.P. Agarwal & L.S. Chauhan, Tuberculosis Control in India (Directorate Gen. of Health Servs., Ministry of Health & Fam. Welfare 2005).
[8] Ministry of Health, Government of India, Report of the Health Survey and Planning Committee (1962), https://nhsrcindia.org/sites/default/files/2021-04/Mudalier%20Committee%20Report.pdf (last visited Dec. 30, 2024).
[9] Zaman, Forhad Akhtar. "Journey of Tuberculosis Control in India: From then till now." Journal of Comprehensive Health, vol. 9, no. 1, 2021, pp. 5–10. https://doi.org/10.53553/JCH.v09i01.003.

internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, was launched in 1997, and expanded across the country in a phased manner. Full nationwide coverage was achieved in March 2006. The Revised National Tuberculosis Control Programme (RNTCP), based on the internationally recommended Directly Observed Treatment Short-course (DOTS) strategy, was launched in 1997, and expanded across the country in a phased manner. Full nationwide coverage was achieved in March 2006.[10]In 1993, the Revised National TB Control Programme was piloted in a population of 2.4 million in the states of Delhi, Gujarat, Kerala, Maharashtra and West Bengal. This was later expanded to cover 13 million people by 1995, and 20 million by 1996. The programme was based on DOTS (the internationally-recommended strategy for TB control) which promotes diagnosis by sputum smear microscopy, direct observation of treatment, standardized regimens, recording and reporting of notified cases and treatment outcomes, and political commitment.[11]

V. RIGHT TO HEALTH POLICY FRAMEWORK

The Right to Health is mentioned under Article 12(1) of the International Covenant on Economic, Social and Cultural Rights (ICESCR) "The States Parties to the present Covenant recognize the right of everyone to the enjoyment of the highest attainable standard of physical and mental health."[12] States are obligated to respect, protect, and 1291ulfil the right to health—that is, they must refrain from taking actions that would interfere with the right to health, prevent third parties from impairing the right to health of others, and adopt appropriate measures towards the full realization of the right to health.[13] CESCR General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12) ,Article 12.2€ emphasizes the right to prevention, treatment, and control of diseases. It requires states to establish programs addressing behavior-related health issues, such as sexually transmitted diseases (e.g., HIV/AIDS) and sexual and reproductive health concerns, while promoting the social determinants of health, including environmental safety, education, economic development, and gender equity. Efforts include making relevant technologies available, improving epidemiological data collection, implementing immunization programs, and enhancing

[10] Kuldeep Singh Sachdeva et al., New Vision for Revised National Tuberculosis Control Programme (RNTCP): Universal access – 'Reaching the un-reached', 135 Indian J. Med. Res. 690 (2012).Lippincott Journals+11
[11] World Health Org., A Brief History of Tuberculosis Control in India (2010), https://iris.who.int/bitstream/handle/10665/44408/9789241500159_eng.pdf.
[12] G.A. Res. 2200A (XXI), art. 12(1), U.N. Doc. A/6316 (Dec. 16, 1966), International Covenant on Economic, Social and Cultural Rights.
[13] Dipika Jain & Brian Tronic, Tuberculosis in India: A Human Rights Approach to Healthcare, 24 S.W. J. Int'l L. 219 (2018), https://www.swlaw.edu/sites/default/files/2018-08/SWT201.pdf

infectious disease control strategies. It also entails providing urgent medical care during accidents, epidemics, and disasters, as well as offering humanitarian assistance during emergencies.[14]

Right to Health is not explicitly mentioned in the Indian Constitution. However, it is now settled law that right to health is an integral to right to life as per Art. 21 of the Indian Constitution . Government has constitutional obligation to provide the health facilities.[15] The Supreme Court in Consumer Education and Research Centre v. Union of India explicitly held that the right to life meant a right to a meaningful life, which was not possible without having a right to healthcare.[16] Any International Convention not inconsistent with the fundamental rights and in harmony with its spirit must be read into these provisions to enlarge the meaning and content thereof, to promote the object of the constitutional guarantee.[17] Furthermore, the Supreme Court has indicated that international human rights law should be "read into" the fundamental rights enumerated in the Indian Constitution in the absence of domestic statutory law on a given issue.[18]

VI. MONITORING AND ACCOUNTABILITY

In India, the enforcement of tuberculosis (TB) notification and the regulation of anti-TB drugs are governed by specific legal provisions to ensure effective disease surveillance and control.

A. Mandatory TB Notification

Since 2012, TB has been classified as a notifiable disease in India, requiring all healthcare providers, including private practitioners, to report diagnosed cases to the government. Non-compliance with this mandate can lead to legal repercussions under the Indian Penal Code (IPC):

Sec 271 of BNS pertain to negligent and malignant acts likely to spread infection of diseases

[14] See Comm. on Econ., Soc. & Cultural Rights, Econ. & Soc. Council, Substantive Issues Arising in the Implementation of the Int'l Covenant on Econ., Soc. & Cultural Rights: General Comment No. 14: The Right to the Highest Attainable Standard of Health (Art. 12), ¶¶ 33, 50–52, U.N. Doc. E/C.12/2000/4.
[15] State of Punjab and Others v. Mohinder Singh, AIR 1997 SC 1225 (India)
[16] Dipika Jain & Brian Tronic, Tuberculosis in India: A Human Rights Approach to Healthcare, 24 S.W. J. Int'l L. 219 (2018), https://www.swlaw.edu/sites/default/files/2018-08/SWT201.pdf.
[17] Vishakha v. State of Rajasthan, (1997) 6 SCC 241, ¶ 14 (India)
[18] Dipika Jain & Brian Tronic, Tuberculosis in India: A Human Rights Approach to Healthcare, 24 S.W. J. Int'l L. 219 (2018).

dangerous to life. Failure to notify TB cases may result in penalties, including imprisonment for up to two years, fines, or both.[19]

B. Regulation of Anti-TB Drugs

Anti-TB medications are categorized under Schedule H1 of the Drugs and Cosmetics Rules, 1945, introduced through Gazette notification GSR 588€ dated August 30, 2013. This classification imposes stringent controls to prevent misuse:

C. Prescription Requirement: Schedule H1 drugs must be dispensed only with a valid prescription from a registered medical practitioner.[20]

D. Record-Keeping: Pharmacies are required to maintain a separate register documenting the supply of Schedule H1 drugs, including details of the prescriber, patient, and the quantity supplied. These records must be preserved for three years and made available for inspection.[21]

E. Penalties for Non-Compliance: Pharmacies violating these regulations may face penalties, including fines and suspension of licenses, to prevent misuse and ensure appropriate treatment.[22]

VII CASE STUDY

A. Case Study: Migrant Workers and TB Prevention in Nasik, Maharashtra

A rights-based intervention was implemented in Nasik, Maharashtra, targeting tuberculosis (TB) prevention and treatment among migrant workers. Conducted by the Public Health Foundation of India (PHFI) in collaboration with the Disha Foundation, this intervention was supported by the Indian Council of Medical Research (ICMR).

The study highlighted significant barriers faced by migrant workers, including:

1. Poor Living Conditions: Overcrowding, poor ventilation, and inadequate sanitation

[19] Bharatiya Nyaya Sanhita [BNS] § 271 (Draft 2023).
[20] National Tuberculosis Elimination Program, Schedule H-1 Regulation, https://ntep.in/node/938/CP-schedule-h-1-regulation.
[21] National Tuberculosis Elimination Program, Schedule H-1 Regulation, https://ntep.in/node/938/CP-schedule-h-1-regulation
[22]Arun Kumar, Schedule H1 Drugs and Its Implementation in India, PHARMA PUSH, https://pharmapush.com/schedule-h1-drugs-and-its-implementation-in-india/.

increased vulnerability to TB.

2. Limited Awareness: Low literacy levels and lack of knowledge about TB symptoms and treatment options delayed diagnosis and care.

3. Barriers to Healthcare Access: Migrants faced challenges such as language barriers, long distances to healthcare facilities, and work schedules that conflicted with clinic hours.

4. Stigma and Exclusion: Employers often restricted workers' access to healthcare due to perceived productivity loss.

B. Key Outcomes

1. Human Rights-Based Approach:

Advocated for non-discrimination and inclusion of migrants in the Revised National Tuberculosis Control Program (RNTCP).

Emphasized accountability and participation, involving employers and government health services in TB control efforts.

2. Workplace Interventions:

Conducted TB awareness programs at workplaces, employing multilingual Information, Education, and Communication (IEC) materials.

Organized onsite TB screening and referral camps with active employer participation.

3. Policy and Practice Changes:

Integrated migrant-specific TB strategies into RNTCP action plans.

Ensured regular visits by healthcare providers to migrant camps for TB screening and treatment.

4. Recommendations for Sustainability

The intervention concluded that addressing TB among informal migrant workers requires:

- National outreach strategies tailored for migrants.
- Active employer involvement in improving work and living conditions.
- Continued advocacy for inclusive and sustainable healthcare policies.

This study underscores the need for targeted interventions to achieve a TB-free India, particularly for marginalized and mobile populations.[23]

VIII. INDIA'S TB PROGRAMME NEEDED RECOMMENDATIONS

A. Strengthen Legal Frameworks to Uphold Human Rights:

1. Tackle the underlying socio-economic factors contributing to TB

India has the highest burden of tuberculosis (TB) in the world. Rather, it thrives on the most vulnerable—the marginalized, the ostracized, and the poor. concern in India because it has the highest number of malnourished persons in the world, a growing slum population that was projected to exceed 104 million by 2017, and, as of 2011, over 720 million people living in poverty. Socio-economic factors significantly influence TB prevalence in India, with undernutrition accounting for half of active cases among adolescents and adults and poor housing doubling TB risk. Social protection spending is linked to reduced TB incidence and mortality. To combat malnutrition, India must strengthen its Public Distribution System (PDS), address issues like corruption, poor targeting, and accountability, and fully implement the National Food Security Act, 2013, which includes reforms for better grievance redressal, monitoring, and transparency. The Antyodaya Anna Yojana (AAY) scheme, which benefits the "poorest of the poor," should include TB patients, as malnutrition exacerbates TB.

For housing, slum upgrades under the "Housing for All by 2022" scheme must adopt a participatory approach, ensuring residents' rights and needs are prioritized. India's international human rights obligations and domestic legal framework, including Article 21 of the Constitution, recognize the right to health, food, and adequate shelter. Courts have affirmed these rights, such as providing water to residents in illegal settlements and mandating

[23] Anjali B. Borhade et al., Tuberculosis Prevention and Treatment among Migrant Workers: A Case Study of Rights-Based Intervention in Nasik, Maharashtra, India, ACADEMIA.EDU, https://www.academia.edu/80415312/Tuberculosis_Prevention_and_Treatment_among_Migrant_Workers_A_Case_Study_of_Rights_Based_Intervention_in_Nasik_Maharashtra_India

subsidized food for the destitute in PUCL v. Union of India. Addressing these socio-economic determinants is critical to reducing TB in India.[24]

2. Innovative community-based approaches

Innovative community-based approaches have been shown to be effective in controlling TB in high-burden areas. Engaging local communities in TB prevention and care can lead to significant reductions in prevalence. The intervention targeted the Saharia tribal population across seven districts of Madhya Pradesh, India, achieving a substantial reduction in pulmonary tuberculosis (PTB) prevalence through innovative community-based approaches. These included active case finding (ACF) and the involvement of village TB volunteers, who provided diagnostic and treatment services within the community. Regular follow-ups by volunteers and project staff ensured high treatment adherence and improved treatment outcomes. The intervention underscores the potential of ACF to enhance TB detection and treatment outcomes in marginalized and tribal populations. It emphasizes the importance of community engagement and integration with existing health systems to ensure sustainability. The success of this approach in the Saharia community suggests its applicability to other resource-poor and high TB burden areas, offering a practical strategy to reduce TB prevalence and its socio-economic impact.[25]

3. Enhance Nutritional Support for TB Patients:

The 'Nikshay Poshan Yojana' scheme, introduced in 2018, provides financial incentives for nutritional support to TB patients. Ensuring adequate nutrition is crucial for patient recovery and can improve treatment adherence.

The disease disproportionately affects the poor and marginalized groups mostly in their productive ages (Oxlade and Murray, 2012; World Health Organization, 2018). Households having TB patients find themselves in a spiral of poverty as high cost, huge income loss and several other economic consequences (e.g. borrowing/selling of personal belongings, inability to pay school fees, rents, regular bills etc.) are associated with TB treatment (Chatterjee et al.,

[24] Venturini, S. "The Role of Human Rights in Tuberculosis Control." Southwestern Journal of International Law.
[25] S. Lee & A. Gupta, Community-Based TB Interventions, 80 Thorax 45 (2025), https://thorax.bmj.com/content/80/1/45.

2023; 2024). Further, TB and malnutrition have bidirectional relationships (Bhargava, 2016; Padmapriyadarsini et al., 2016).

The government of India introduced a benefit scheme namely 'Nikshay Poshan Yojana' (NPY) on 1 April 2018, with the objective of providing support mainly for nutrition to all notified TB patients (Government of India, 2018).

4. Summary for Research Paper Inclusion:

The support provided through the Nikshay Poshan Yojana (NPY) has proven insufficient in alleviating the financial distress faced by tuberculosis (TB) patients. Although primarily aimed at providing nutritional support, the high proportion of households experiencing catastrophic costs highlights the need to revise the benefit amount or introduce additional mechanisms to mitigate the financial burden of TB. Immediate disbursement of at least half of the revised benefit amount upon patient registration is recommended, as a substantial portion of expenses is incurred before treatment initiation.

Delays in benefit distribution remain a critical issue, with many patients not receiving support until the end of their treatment. Addressing administrative challenges in the benefit disbursement process should be prioritized. To improve accessibility, the government could consider providing vouchers during patient registration and TB drug pick-ups, enabling patients to obtain additional rations through the public distribution system. Integrating millets into this system, as part of ongoing efforts, would further enhance nutritional support for TB patients.

The recently introduced 'Nikshay Mitra' scheme, which allows elected representatives, NGOs, and individuals to support TB patients, could prioritize those in remote rural and tea garden areas who face the greatest challenges. While revising the benefit amount and optimizing the timing of distribution are essential immediate measures, long-term strategies should focus on reducing pre-diagnosis costs to lower overall treatment expenses and prevent catastrophic financial impacts.[26]

[26] M. Rao et al., Nutrition and Tuberculosis: Strengthening Interventions, 39 HEALTH POL'Y & PLAN. 854 (2024), https://academic.oup.com/heapol/article/39/8/854/7710621

5. Prevent Loss of TB Cases in the Care Cascade:

In India, the National Tuberculosis Program (NTP) was started in 1962 to identify and treat TB patients and reduce the magnitude of TB as an infectious disease and public health problem. Besides NTP, both National Tuberculosis Institute in Bangalore and Tuberculosis Research Centre in Chennai were established with the same objectives and activities of case detection, case treatment, health education, and Bacillus of Calmette and Guérin (BCG) vaccination. However, NTP suffered from inadequate program funding, irregular drug supply, and weak administration. The wide age group is highly connected through social media, accounting for more than 50 percent user base in India. By effective usage of the Internet, social media platforms can be used as advocacy instruments to prevent, track, and treat TB among the youth and other population groups.

Establishing robust support systems to prevent loss of TB cases during the care process is vital. Ensuring free access to TB drugs and universal treatment regimens can improve patient outcomes. [27]

The recently conducted national TB survey in India (2019–2021) reports that more than three persons per 1000 had active TB infection (Government of India, MOHFW. (2021), which is much higher than WHO's 2020 estimate of 1.8 persons per 1000 active infection cases. Delhi recorded the highest number of TB patients in India, with over 5 patients per 1000 persons. In India, the highest thrust of TB is carried by people aged 15–45 years.

6. Improve TB Preventive Treatment (TPT) Implementation:

Addressing barriers to TPT implementation, such as lack of awareness and access issues, can enhance TB control efforts. Implementing solutions to these barriers is essential for effective TB prevention.

Summary for Research Paper Inclusion:

The Indian healthcare system faces significant challenges in managing tuberculosis (TB) and implementing tuberculosis preventive treatment (TPT), particularly due to limited human resources and inadequate infrastructure. The shortage of trained healthcare workers, especially

[27] Promita Majumdar, Tuberculosis in India: Overview, Challenges, and Way Forward in the Post-COVID-19 Era, 44 SOC. DEV. ISSUES 4 (2022), https://journals.publishing.umich.edu/sdi/article/id/3702/.

in rural and remote areas, often delays crucial processes such as diagnosis, initiation of TPT, and follow-up, negatively impacting treatment adherence and completion rates. Additionally, logistical challenges arise from insufficient diagnostic facilities and the lack of proper storage and dispensing mechanisms for TPT medications, further complicating programme implementation in under-resourced regions.

Adherence to TPT regimens remains a critical issue due to the lengthy duration of treatment, typically lasting six to nine months. The burden is exacerbated by adverse side effects of medications, inconvenient clinic hours, and long travel distances, all of which deter patients from completing their treatment. Poor awareness about TPT and its benefits further limits programme effectiveness, as communities often lack understanding of the importance of completing the medication course. These barriers are compounded by the stigma associated with TB, which discourages individuals from seeking treatment or disclosing their TB infection (TBI) status, leading to reluctance in initiating or completing TPT.

Socio-economic challenges amplify these issues, with poverty and inadequate social support being prominent obstacles. Affected individuals often face competing demands on limited family resources, making it difficult to prioritize treatment. Missed workdays for clinic visits or side effect management can result in lost wages, creating financial strain for patients and their families. These socio-economic pressures, combined with healthcare system inefficiencies and community-level stigma, present substantial barriers to successful implementation of TPT and TB management programmes. Addressing these multifaceted challenges requires a comprehensive and integrated approach that enhances healthcare infrastructure, promotes awareness, and provides socio-economic support to vulnerable populations.[28]

7. "India's plan to eliminate tuberculosis by 2025: converting rhetoric into reality":

By Madhukar Pai et al., published in *BMJ Global Health*, critiques India's ambitious goal to eliminate TB by 2025. The authors argue for increased governmental expenditure on health and the necessity of legal reforms to effectively tackle TB.

[28] A. Sharma & R. Verma, Tuberculosis Preventive Treatment (TPT) in India: Current Strategies and Future Directions, 2024 PULM. MED. REV. & RES. (2024), https://journals.lww.com/pmrr/fulltext/2024/01060/tuberculosis_preventive_treatment__tpt__in_india_.5.aspx.

The declaration is extraordinarily ambitious, considering that India accounts for 27% of the world's 10.4 million new TB cases, and 29% of the 1.8 million TB deaths globally. India also accounts for 16% of the estimated 480 000 new cases of multidrug-resistant TB. The End TB Strategy by WHO aims to end the global TB epidemic, with targets to reduce TB deaths by 95% and to cut new cases by 90% by 2035.

First and foremost, India needs to give priority to and begin investing in health. For decades, governmental expenditure on health has been one of the lowest in the world at 1.4% of the GDP (but even lower in the previous years). While the 2017 Union Budget has allocated additional funding for health, the allocation will substantially fall short of the 2.5% of the GDP that has been considered a realistic goal in the draft National Health Policy 2015.

India's TB control programme must prioritize meaningful engagement with the private sector, which handles significant volumes of anti-TB drugs. Despite the success of the Revised National Tuberculosis Control Programme (RNTCP) in increasing public healthcare usage, many patients initially seek care in private or informal sectors, often facing fragmented and poor-quality care. Pilot projects in cities like Mehsana, Mumbai, and Patna demonstrate the potential for increased TB notifications and improved outcomes through private-sector collaboration. These insights should inform a comprehensive strategy to enhance care quality and enforce private providers' obligation to notify TB cases.

Investment in research and surveillance is critical. Priorities include developing and validating new tools like rapid diagnostics, drugs, and vaccines, as well as conducting periodic prevalence surveys and tracking TB deaths. The establishment of the India TB Research and Development Corporation in 2016 is a positive step, but sustainable funding and partnerships are essential for its success.

Civil society and patient advocacy groups must be empowered to play a more active role. Their engagement can sustain attention on TB, reduce stigma, address patient barriers, and encourage the Ministry of Health to allocate sufficient resources.

India's ambitious goal to eliminate TB by 2025 reflects strong intent, but achieving it will require adequate funding and robust implementation of the National Strategic Plan (NSP) for

2017–2025.[29]

8. "Tuberculosis preventive treatment: the next chapter of tuberculosis elimination in India":

By Kiran Rade et al., published in *BMJ Global Health*, discusses the challenges and opportunities in implementing TB preventive treatments in India. The article highlights the need for policy and legal frameworks to support these initiatives.

Over the past decade, India has accomplished numerous impressive achievements in tuberculosis prevention, care and control. The RNTCP has screened more than 80 million people for tuberculosis, successfully treated 15 million patients and saved millions of lives. Leading by example, India can contribute to the global knowledge of TPT through research and programmatic implementation. The next chapter in tuberculosis elimination in India will require evidence-based, cost-effective and sustainable interventions. TPT will play a major role in bending the epidemiological curve in India. This will require constant innovation, locally driven solutions, and persistent programme monitoring and evaluation to address the diverse and dynamic tuberculosis epidemiology. As new tools, regimens and approaches emerge, midcourse adjustments to policy and practice must be quickly adopted and sufficiently resourced. The development and implementation of new tools and strategies will call for close collaboration between local, national and international partners—both public and private—national health authorities, non-governmental organisations, research community and the diagnostic and pharmaceutical industry. Together our collective effort will end tuberculosis in our lifetime.[30]

9. Case Law:

A. Kaushal Tripathi v. Lal Ram Sarup TB Hospital, W.P.(C) 11879/2016: in December 2016, the father of a minor girl with multi-drug resistant TB filed a writ petition in the Delhi High Court seeking treatment with the drug Bedaquiline, which had been denied. [31]

[29] Madhukar Pai, Soumyadeep Bhaumik & Soumitra S. Bhuyan, India's Plan to Eliminate Tuberculosis by 2025: Converting Rhetoric into Reality, 2 BMJ GLOBAL HEALTH e000326 (2017), https://gh.bmj.com/content/2/2/e000326.
[30] Madhukar Pai, Tuberculosis Preventive Treatment: The Next Chapter of Tuberculosis Elimination in India, 3 BMJ GLOB. HEALTH e001135 (2018), https://gh.bmj.com/content/3/5/e001135
[31] Kaushal Tripathi v. Lal Ram Sarup TB Hospital, W.P.(C) 11879/2016

IX. CONCLUSION

Tuberculosis remains a test of India's public health system, a manifestation of entrenched socio-economic inequalities, structural healthcare constraints, and legal enforcement deficits. Despite such efforts as the National Tuberculosis Elimination Programme and constitutional safeguards under Article 21, far more needs to be done in order to close the gap between policy and practice. The constitutional and international recognition of the right to health needs to be converted into concrete commitments, particularly for the vulnerable sections like migrant workers, slum residents, and tribal people. Constitutional safeguards, international commitments, and judicial pronouncements together place an obligation upon the state to provide equal, stigma-free access to health services. Strengthening the law, improved accountability, increasing community-based care, and treating underlying social determinants such as malnutrition and housing are essential measures in this direction. In order to achieve its ambitious goal of eradicating TB by 2025, India will need to use a comprehensive, rights-based strategy that puts human dignity and justice at the heart of its efforts against TB.