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Decentralized governance in public health: Developing strategies to engage panchayat Raj Institutions (PRI) in Tuberculosis control

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Summary

1. Context and Conceptual Framework
The Problem: India holds 24% of global tuberculosis (TB) cases, but 46% go unreported due to systemic gaps, structural clinic friction and social stigma.
The Framework: To optimize the National Tuberculosis Elimination Program (NTEP), the system must bridge the *Etic* (objective, systemic view) and *Emic* (subjective, community view) perspectives by mobilizing Panchayati Raj Institutions (PRIs).

2. Methodology and Profiles

Field Studies: Qualitative Focus Group Discussions (FGDs, n=52) and in-depth interviews (n=120) were held across four blocks.

Cohorts: The study engaged PRI leaders, healthcare staff, TB patients (predominantly male, 35% unemployed due to illness), and the general public (93.8% rural, 62.5% female).

3. Key Findings and Friction Points

Healthcare Status: Frontline *Makkalai Thedi Maruthuvam* (MTM) home-care is highly respected, but local clinics suffer from understaffing and extreme wait times. Private emergency alternatives heavily drain family budgets, averaging ₹5,000 monthly.

The DBT and DOTS Gaps: A critical blind spot exists in Palani block where TB awareness is virtually non-existent. Crucially, Direct Benefit Transfer (DBT) funds are delayed until *after* treatment completion, failing to support active financial crises. Furthermore, zero general public respondents expressed interest in acting as DOTS providers.

4. Strategic PRI Mobilization Pathway

Implementation: Future screening camps should integrate with 100-day workplace (MGNREGA) sites during morning hours to minimize livelihood disruption.

Prerequisite: While PRI leaders are willing to dedicate 2 to 3 hours weekly, they-alongside village sanitary workers—must be systematically trained first to eliminate local stigma and run effective outreach.

Key words: Key words: PRI participation, TB Control, FGD, IDI, intervention strategies

I. Problem Statement

India is the most populous country globally, alongside China, and acts as home to 25% of global tuberculosis (TB) cases[1] and 27% of the world's missing cases. Preventable deaths[2] due to TB in India rose from 220,000 in 2014 to 480,000 in 2015 Two critical factors driving this upward trend are patient loss to follow-up (LTFU) and non-adherence to therapeutic regimens.

Despite the establishment of the Revised National TB Control Programme (RNTCP)[3] and the widespread deployment of the WHO recommended DOTS strategy, India's public health system faces a steep hurdle: **nearly 46% of TB patients go unreported to official centers**. This massive gap is caused by a single factor or a combination of three distinct target population barriers:

- **Systemic Gaps:** Poor basic knowledge[3] about TB and a widespread lack of awareness that diagnostic and treatment services are completely free through the public health framework.[4]
- **Structural Friction:** Inconvenient geographic locations or conflicting operating hours of public health clinics.
- **Social & Emotional Barriers:** Intense social stigma surrounding the disease, leading to a strong desire for strict confidentiality and a preference for personalized, familiar local care over bureaucratic health centers.

II. The PRI Infrastructure: An Underutilized Solution

Panchayati Raj Institutions (PRIs) represent India's grassroots governance system. They constitute a voluminous, underutilized human infrastructure network that sits directly at the doorstep of rural communities. The 73rd Constitutional Amendment Act of 1992[5] legally integrated health and sanitation into the mandatory functions of PRIs. At the national level, this system spans over 238,000 village panchayats across 31 states.

At the specific study site of Tamil Nadu, this robust three-tier PRI[6] presence aligns with public health administration units:

Administrative Level	PRI Structural Component
District	32 District Panchayats
Block / Union	385 Panchayat Unions
Village	12,618 Village Panchayats (40,879 Wards)

Proven Precedents of PRI Success

Data from neighboring states confirms that when PRIs are given administrative backing, public health delivery improves significantly:

- **The Kerala Model:** A Planning Commission study demonstrated that PRIs successfully took over the structural management of Public Health Institutions (PHIs). They maintained physical infrastructure, pooled local funds to purchase backup medicine/equipment, and co-ran Hospital Management Committees alongside health officials to maximize[7, 8] community participation.
- **The Andhra Pradesh Model:** Research showed that 90% of rural citizens trusted the Gram Sabha (the general assembly of the village) as an unbiased entity for selecting welfare beneficiaries, proving that PRIs hold immense local goodwill[9].
- **The Gender Dividend:** High rates of women's representation within PRIs directly correlates with reduced corruption, heightened local accountability, and a stronger advocacy focus[10] on household health and welfare.

III. Current challenges

The Structural Awareness Gap

Although legal provisions exist under the 73rd Amendment, real world impact is limited by deep cultural variables such as a caste influenced society and a profound lack of structural awareness among PRI members regarding their legal health responsibilities.

To successfully involve local governance, public health programs like the National Tuberculosis Elimination Program (NTEP) must bridge the gap between systemic health assessments and community realities. This requires integrating the "Emic vs. Etic" framework.

[National Tuberculosis Elimination Program (NTEP)]

The ETIC Perspective	**The EMIC Perspective**
(Outsider / Systemic View)	(Insider / Community View)
• Scientific & Objective	• Experiential & Situational
• Measurable Behaviors	• Cultural & Social Contexts

Deconstructing Emic vs. Etic

• **The Etic Perspective (Systemic / Outsider View):** Concentrates on external, objective, and quantifiable elements of human behavior. Frequently linked to the scientific method, it presupposes that behavior can be observed, measured, and analyzed in a controlled fashion independently of cultural or historical contexts. It serves as a value capturing approach to address operational challenges, enhance efficiency, and minimize system costs.

• **The Emic Perspective (Insider / Community View):** Highlights internal, subjective, and contextual dimensions. It is founded on the premise that actions cannot be fully understood without considering cultural, social, and historical backgrounds, emphasizing the personal experiences, beliefs, and values individuals associate with their health choices.[11]

IV. Social Mobilization

The "Emic vs. Etic" framework directly aligns with Community Based Rehabilitation (CBR) Guidelines[12](Figure-1) by equipping local leaders with the knowledge and skills necessary to organize collective actions. This integration operates within the framework of Social Mobilization Theory, which outlines how social movements and collective actions arise and spread.

The theory posits that as individuals become more socially connected, educated, and civically engaged, the barriers to collective action lower. Five critical factors drive this mobilization:

1. **Enhanced Access to Communication:** Better information channels facilitate the swift dissemination of grievances, health ideologies, and calls to action.
2. **Increasing Levels of Literacy and Education:** Provides community members with the core knowledge and skills required to organize collective efforts.
3. **Weakening of Traditional Social Ties:** Liberates individuals from restrictive, historical institutions to explore new avenues of social and political involvement.
4. **Perceived Relative Deprivation:** An escalating sense of injustice or shared community vulnerability drives individuals to pursue systemic change together.
5. **Availability of Political Opportunities:** Structural openings within the political system or the emergence of influential allies (like PRIs) facilitate localized rallying and support.

By combining these elements, a community transitions from passive consumerism to active public health advocacy, allowing public health teams to tap into the voluminous, local human resource pool for the control of communicable diseases.

V. Methodology

Under the aegis of the Department of Health Research (DHR), a field study team set out to devise a localized action plan to involve people's representatives in community level TB control activities. This initiative marks the first of its kind targeting communicable diseases through direct PRI mobilization.

To capture both the systemic (Etic) and community (Emic) insights, the team deployed a dual qualitative methodology:

• **Focus Group Discussions (FGDs):** Conducted across four intervention centers, gathering a total of 52 participants. Each FGD comprised 11 to 20 male and female stakeholders (including PRI representatives and health system staff), ensuring maximum participant comfort.

• **In-Depth Interviews:** A total of **120 individual interviews** were executed, comprised of **40 active TB patients** and **80 general community members** to map the complete socio-demographic and perceptual landscape of the study site.

FGD Methodology and Participant Profile

Sampling and Recruitment

• **Recruitment Strategy:** Participants connected to the local health system and local administration was contacted. Those who expressed willingness and provided informed written consent were invited to participate.

• **Group Composition:** Discussions were held across four intervention centers. Each FGD comprised 11 to 20 male and female participants, with careful measures taken to maximize comfort levels.

• **Sample Size:** A total sample of 52 members participated and was analyzed.

Socio-Demographic Breakdown (Table 1 Summary)

• **Geographic Distribution:** Participation spanned four distinct blocks: Natham had the largest representation with 20 participants (38.5%), followed by Guziliamparai and Pappampatti with 11 participants each (21.2% each), and R. Chatram with 10 participants (19.2%).

• **Gender:** Men constituted slightly over half of the respondents (53.8% / 28 counts), while women made up 46.2% (24 counts).

• **Age:** The sample was split equally, with 50.0% (26 counts) aged 43 years & below, and 50.0% (26 counts) aged 44 years & above.

• **Occupational Profile:**

- *Agriculture & related fields:* 36.5% (19 counts), peaking sharply in Pappampatti.
- *Panchayati Raj Institution Representatives:* 25.0% (13 counts), making up one-fourth of the total cohort.
- *Healthcare Staff:* 21.2% (11 counts), matching the representation of the PRI members.
- *TB Workers:* 9.6% (5 counts).
- *NGOs and Volunteers:* 3.8% each (2 counts each). **Please refer to Table-1**

Key Thematic Findings

The guidelines utilized during the discussions evaluated three broad operational domains:

1. Health System and Access

• **Facility Availability and Preferences:** One-third of the respondents noted that Primary Health Centres (PHCs) are available within a 3km radius. While a few private facilities exist, villagers show a hesitancy toward traditional medicine and highly prefer public hospitals for significant illnesses. Most villagers use local PHCs for baseline needs and get referred to the nearest Government Hospital (GH) for major concerns.

• **Acceptance of Frontline Services:** The *Makkalai Thedi Maruthuvam* (MTM) home healthcare initiative is widely accepted by villagers. Additionally, health camps organized by NGOs are heavily utilized, provide valuable health information, and are noted by some to give preference to women.

• **Post-Pandemic Shift:** Villagers have fully utilized government hospitals since the COVID-19 pandemic. While people use private care for generic, minor ailments (such as colds, minor fevers, or generalized pain), some participants felt local PHCs exist "for name's sake" because patients are frequently referred to the GH even for small injuries, dog bites, or snake bites.

• **Reciprocal Satisfaction:** Most respondents expressed high satisfaction with government hospitals, noting that staff treatment has changed significantly for the better. Healthcare workers are encouraging and treat patients respectfully regardless of status. However, understaffing causes clear structural strain; respondents noted that workers occasionally get annoyed due to intense work pressure and manpower shortages, but would offer services rivaling private hospitals if they had adequate personnel.

• **Systemic Improvements:** The absence of emergency transport facilities was highlighted as a major vulnerability. Respondents also requested that Village Health Nurses (VHNs) adjust their schedules to visit homes when villagers are actually available. Responding to this, a village panchayat president participating in the session declared a willingness to procure a vehicle for patient transport, provided the beneficiaries arrange the logistics to use it on the day of need.

2. Tuberculosis Control Programme

• **Epidemiological Beliefs and Symptoms:** Participants widely believe that TB predominantly infects men, citing smoking and alcohol consumption as the primary drivers. Aware respondents correctly identified key symptoms: chronic cough, fever, night sweats, loss of appetite, and weight loss.

• **Regional Awareness Gaps:** A severe blind spot was identified in Palani block, where almost all respondents had never heard of TB and possessed little to no knowledge of its symptoms.

• **The DBT Financial Gap:** Participants are fully aware of the Direct Benefit Transfer (DBT) scheme but voiced a critical complaint: funds are credited only *after* completing TB treatment. This delayed timeline fails to help patients survive the severe financial crisis experienced during active treatment, leading to calls for funds to be distributed dynamically while treatment is ongoing.

• **Stigma & Screening Initiatives:** Social stigma remains a barrier, preventing symptomatic individuals from approaching hospitals even when referred by peers. To counter this, respondents suggested utilizing targeted radio broadcasts and pamphlets alongside NGO-led screening camps.

• **Local Willingness:** Representatives in Reddiyarchatram demonstrated high proactive intent, guaranteeing support to organize screening camps across all town panchayat wards. They emphasized that future TB screening camps must be executed with adequate advance public information.

3. Feasible Strategy for PRI Involvement

• **Leadership Activation:** Respondents agreed that PRI engagement must be structured, active, and include the direct participation of the panchayat president.

• **Time Commitment:** Most representatives expressed a willingness to dedicate 2 to 3 hours per week to TB control activities, specifically preferring morning hours.

• **Actionable Roles:**

○ *Referrals and Awareness:* One-third of the respondents are willing to actively generate community awareness and directly refer symptomatic individuals to formal healthcare institutions.

○ *Operational Partnerships:* Respondents recommend that TB screening camps be organized directly through local PHCs. Furthermore, they highlighted a major opportunity to train and involve village sanitary workers to quietly identify symptomatic individuals and drive awareness during their routine local rounds.

The table below mappings these conflicting realities using the study's quantitative and qualitative findings:

The Emic vs. Etic Diagnostic Matrix

Key Domain	The Etic Perspective (Systemic/Outsider)	The Emic Perspective (Insider/Community)
Healthcare Access & Infrastructure	• **Resource Distribution:** Standard PHCs mapped within a 3km radius. • **Operational Standard:** 24/7 emergency readiness, available lab	• **Structural Friction:** Serious transport deficits during emergencies; high reliance on autos or private clinics (costing ₹500–

	testing, and fully stocked free pharmacies.	₹2,500) for local issues due to long waiting times and a lack of medical officers at local Health Sub-Centres (HSCs).
TB Service Delivery & Financing	• **Financial Safety Net:** Direct Benefit Transfer (DBT) via Nikshay Poshan Yojana offers standard nutritional support. • **System Reach:** 46% of patients remain unreported/missing globally due to loss to follow-up (LTFU) or reliance on informal sectors.	• **Cash Flow Delays:** DBT funds land *after* treatment completion, failing to resolve the immediate, active financial crisis during employment loss (35% of surveyed TB patients are unemployed). • **Social Friction:** Fear of losing strict confidentiality; severe community stigma drives patients away from bureaucratic health blocks.
Awareness & Epidemiology	• **Clinical Indicators:** Chronic cough, night sweats, blood in sputum, and airborne transmission dynamics.	• **Behavioral Beliefs:** Strong local perception that TB uniquely affects men due to smoking and alcohol. Some blocks (e.g., Palani) exhibit near-total blindness regarding standard TB symptoms.
Community Mobilization Assets	• **Human Resource Pool:** Decentralized 3-tier PRI structure (District, Block, Village) legally mandated by the 73rd Amendment to oversee local health and sanitation.	• **Trust Deficit & Dividends:** Mixed feelings; 37.5% of patients worry local leaders won't support them, while 42% find them supportive. However, 90% view the broad *Gram Sabha* structure as unbiased, and community members are eager to leverage safe spaces like the 100-day workplace (MGNREGA).

In-depth interviews

The study team conducted **120 qualitative in-depth interviews** across four block primary health centres (Gujiliamparai, Kanniwadi, Natham, and Palani) to assess grassroots health infrastructure and opportunities for localized tuberculosis (TB) interventions. The sample was split into two separate cohorts:

- **TB Patients (n=40):** Selected uniformly across the four sites to evaluate the lived experience of the disease, barriers to treatment, and expectations of governance.
- **General Public / Non-TB Participants (n=80):** Selected to map baseline community perceptions, healthcare-seeking preferences, and general health literacy.

Profile and Perspectives of TB Patients (n=40)

Socio-demographic Profile

- **Gender & Age:** Men comprised the majority at 62.5% (n=25), while women made up 37.5% (n=15). The median age was 50, with more than half (52.5%) of the patients aged 50 and above.
- **Education:** 25.0% were illiterate, 20.0% had primary school education, 40.0% had completed middle school (6th–8th standard), and 15.0% had completed higher secondary or collegiate schooling.
- **Marital & Economic Vulnerability:** While 80.0% were married and held primary responsibility for running their families, **35.0% were unemployed**—a statistic directly attributed to the clinical severity of the disease. Wage earners and business owners made up 27.5% and 35.0% respectively. **Please refer to Table-2**

Perceptions of PRI Support

The patient cohort revealed polarized opinions regarding individual local political figures:

- **Negative/Apprehensive Perception:** 37.5% of respondents (10 men, 5 women) believed that local peoples' representatives would not offer meaningful support to TB patients.
- **Positive Perception:** 42.0% of respondents (11 men, 6 women) viewed PRI representatives as supportive.

Recommendations for Community Screening

To operationalize successful local testing camps, patients highlighted four clear criteria:

1. **Workplace Integration:** 20.0% of respondents (6 men, 2 women) stated that camps hosted directly at the **100-day workplace (MGNREGA sites)** would be the most effective, as it minimizes livelihood disruption.
2. **Advance Notice:** 15.0% (3 men, 3 women) stressed that providing prior community information is a mandatory operational requirement.
3. **Local Governance Trust:** 17.5% recommended that village panchayats be officially entrusted to organize these screenings.
4. **Systemic Leadership:** The formal public health system (PHCs) must maintain the functional lead in executing screening activities.

Operational Preferences for Screening Camps

• **Volunteerism:** A strong segment of respondents (6 men, 4 women) expressed explicit willingness to act as baseline field volunteers.

• **Time Commitments:** Respondents were evenly split on time availability, with equal tenths willing to offer support for a full day, a half-day, or 1 to 2 hours, with some prioritizing weekends.

• **Timing Shifts:** Morning hours were preferred by 30.0% of respondents (8 men, 4 female), evening hours by 27.5% (6 men, 5 women), and Sundays specifically by 12.5%.

• **Perceived Barriers:** While 35.0% predicted **"no barriers"** to screening, 15.0% identified prevailing social stigma as a major intervention deterrent, followed closely by personal fear (10.0%) and occupational time conflicts.

Domain evaluation Profile and Perspectives of the General Public (n=80)

Socio-Demographic Profile

• **Gender & Residence:** The sample skewed female (62.5% female vs. 37.5% male) and was overwhelmingly rural (58.8% female, 35.0% male).

• **Age & Education:** 51.3% of the sample was under 32 years of age. The group was highly literate, with 30.0% having completed higher secondary school, 25.1% holding degrees or postgraduate qualifications, and only 10.1% stopping at a middle school level.

• **Employment & Status:** The majority were married (58.8% female, 31.3% male) and occupied salaried positions (36.3% female, 21.3% male) or daily wage labor (11.3% female, 12.5% male).

Evaluation Domain	Consolidated Community Perspectives
Current PHC Status	Public baseline metrics are positive, featuring standard seating, water, and functional toilet facilities. Pharmacies are well-stocked, and emergency cases are managed under a 24-hour care model. Over one-third explicitly prefer public care, while 10.0% express dissatisfaction.
Required Improvements	Local HSCs are limited to basic checkups and lack designated Medical Officers, causing extreme waiting times. Cleanliness needs strict daily maintenance, and laboratory infrastructure requires immediate upgrade.
Financial Friction	While GH care is entirely free, emergency private alternatives drain family finances heavily: emergency clinic visits cost ₹500, emergency medications cost up to ₹2,500, and consultations range from ₹500 to ₹1,200. Total family health budgets average **₹5,000 per month**.
Frontline Performance	MTM home healthcare nurses are highly respected for delivering doorstep diabetes and hypertension care. The community explicitly requests upskilling these nurses to perform secondary diagnostic tests. Healthcare provider attitude across the board is deemed highly respectful, communicative, and prompt.
TB Literacy & DOTS	Baseline transmission literacy is robust (airborne transmission via coughing/sneezing, blood in sputum). However, **zero general public respondents** had ever been involved as a DOTS provider, and none expressed any interest in doing so.
Mobilization Pathways	True community mobilization requires resolving baseline information asymmetry. Utilizing PRIs is recognized as an exceptionally strategic channel to reach rural masses, but with one critical prerequisite: **PRI members must be systematically trained first** before they can effectively educate others.

Conclusion

To successfully involve local governance, the NTEP must bridge the gap between how the health system measures parameters from the outside (**Etic**) and how the community and patients experience them from the within (**Emic**). PRI leaders are willing to contribute 2–3 hours weekly; however, structured, role-specific training for them and village sanitary workers is essential to reduce stigma, standardize outreach, and improve case finding. To minimize livelihood disruption and maximize uptake, future screening camps should be coordinated with MGNREGA 100-day worksites during morning hours, embedding TB services within routine community workflows.

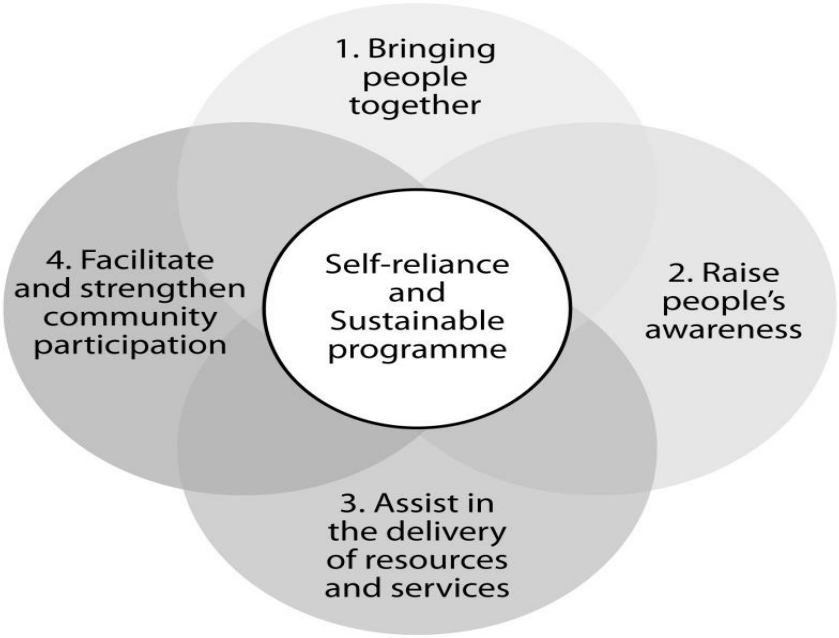
Table -1. Socio demographic profile of the focus group cohort FGD participants

Demographic Parameter	Cohort Category	Participant Count	Percentage Share (%)
Geographical Block	Natham	20	38.5
	Guziliamparai	11	21.2
	Pappampatti	11	21.2
	Reddiyarchatram	10	19.2
Gender	Male	28	53.8
	Female	24	46.2
Age Group	43 Years & below	26	50.0
	44 Years & above	26	50.0
Primary Occupation	Agriculture & Allied Fields	19	36.5
	PRI Representatives	13	25.0
	Healthcare Staff	11	21.2
	Tuberculosis Workers	5	9.6
	NGOs & Community Volunteers	4 (2 each)	7.6 (3.8each)

Table-2. Socio-demographic profile of In-Depth Interview respondents: Patient vs. General Public Perspectives The cohort was split into active TB patients (n=40) and general public members (n=80).

Analytical Domain	**Active TB Patients (n=40)**	**General Public / Non-TB Participants (n=80)**
Sociodemographic Profile	• 62.5% Male, 37.5% Female • Median Age: 50 years (50 & above: 52.5%) • Illiterate: 25.0%, Primary: 20.0%, Middle: 40.0%, Collegiate: 15.0% • Unemployed due to clinical severity: 35.0% • Married with family responsibility: 80.0%	• 62.5% Female, 37.5% Male • Under 32 years: 51.3% • Rural: 93.8% • Highly Literate (Higher Sec/Collegiate): 55.1% • Salaried: 57.6%, Daily Wage:23.8%
Healthcare Seeking Preferences	• Rely on public primary care networks for clinical diagnostics and therapy.	• >33% prefer public primary care; 10% express dissatisfaction due to waiting times.
Financial Friction and Costs	• Experience catastrophic loss of livelihood and income due to active disease.	• Out-of-pocket emergency clinic visit: ₹500 • Emergency medications: ₹2,500 • Private consultations: ₹500–₹1,200 • Family health budget: ₹5,000/month
Perceptions of PRI Support	• Polarized: 37.5% believe PRI reps will not support them; 42% view them as supportive.	• View PRIs as a strategic channel to reach rural masses, but with a critical prerequisite: • PRI members must be trained first.
Screening Preferences and Roles	• MGNREGA sites: 20.0% • Advance notice: 15.0% • Village panchayats: 17.5% • Clinical lead: PHC	• Robust transmission literacy (airborne, blood in sputum). • Zero respondents ever involved as a DOTS provider; none willing to do so.
Operational Barriers	• Predict "no barriers": 35.0% • Social stigma: 15.0% • Personal fear: 10.0%	• Information asymmetry and lack of programmatic coordination at the village level.

Fgure-1: Community-Based Rehabilitation (CBR) Model



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