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Dog Bite Mediated Rabies Free Tamil Nadu 2030: Successful Pathway

Dr. M. S. Saravanan

B.V.Sc., M.A., PGDCM., LME.,

Assistant Director of Animal Husbandry,

Thirumangalam Division, Madurai District, Madurai, India

***Corresponding Author:** cbfdvirudhunagar@gmail.com

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Introduction:

Tamil Nadu has developed a dedicated State Action Plan for Dog-Mediated Rabies Elimination (SAPRE) aligned with India's National Action Plan (NAPRE) and the global WHO target to achieve "Zero by 2030". The core strategy is built around a One Health Approach, integrating human health, animal health, and municipal governance to eliminate human rabies deaths caused by dog bites.

Key Pillars of Tamil Nadu's Pathway to 2030:

1. Zero Stockout Policy & PEP Decentralisation:

Mandatory Vaccine Buffer: The Health Department mandates that all Primary Health Centres (PHCs) and government hospitals maintain a permanent minimum buffer stock of at least 20 Anti-Rabies Vaccine (ARV) vials at all times to prevent shortages. **Intradermal Post-Exposure Prophylaxis (ID-PEP):** Universal, free administration of WHO-recommended intradermal ARV regimens across state medical facilities. This dose-sparing method makes post-exposure care fast, cost-effective, and widely accessible. **No-Doubt Administration:** Guidelines require immediate vaccine administration upon exposure, prioritising life-saving prevention over concerns about potential dose wastage.

2. Mass Canine Vaccination & Ring Vaccination:

Targeting Reservoir Transmission: Achieving zero human rabies requires interrupting the cycle at the animal host. Mass Dog Vaccination (MDV) drives target both domestic pets and free-roaming stray dogs to achieve at least 70 herd immunity. **Ring Vaccination & Door-to-Door Model:** Drawing inspiration from local successes (such as the Nilgiris district maintaining a rabies-free record through door-to-door dog vaccinations), ring vaccination strategies are triggered around suspect cases to quickly isolate potential outbreaks.

3. Animal Birth Control (ABC) Protocols:

Population Management: Scaling up Humane Sterilisation & Birth Control programs managed by

local urban bodies and veterinary authorities to control the stray dog population. Responsible Pet Ownership: Enforcement of pet registration, mandatory annual rabies vaccinations for pets, and restrictions on free-roaming owned dogs.

4. Integrated "One Health" Surveillance:

Cross-Sector Communication: Connecting human bite-victim reporting from hospitals directly with veterinary disease tracking teams. Rapid Response Teams: Joint human-veterinary teams deployed to investigate severe dog-bite clusters, isolate suspected rabid animals, and trace exposed individuals.

5. Public Awareness & Wound Management:

School & Community Outreach: Educating children and the public on safe behaviour around dogs to reduce bite incidents. Immediate First-Aid Awareness: Campaigns emphasising immediate 15-minute wound washing with soap and running water—the single most effective initial step before receiving PEP. Rabies Eradication In Tamil Nadu & India-critical focus area for 2026 to 2030. To achieve its target of a dog-mediated rabies-free India by 2030, the government must move from initial planning to a phase of intense, focused, and data-driven implementation. The years 2026 to 2030 are the "last mile" of the National Action Plan for Dog-Mediated Rabies Elimination (NAPRE). Here is a breakdown of the critical focus areas for India's rabies eradication efforts from 2026 to 2030.

The Strategy: Shifting Focus from "Cases" to "Transmission Cycles"

The fundamental objective must shift. Instead of just managing the disease in humans and dogs, the focus must be on eliminating rabies transmission at its primary source: the free-roaming dog population. The most important goal is not "zero human deaths" (that is the *result*), but rather: Achieving sustained 70% or higher herd immunity within the national dog population.

Implementation: The Three Critical Focus Pillars

To break the transmission cycle, three pillars must be implemented with national scale and consistency.

Pillar 1: Mass Canine Vaccination (MCV) – The "Last Mile" Focus This is the non-negotiable cornerstone of eradication. Between 2026 and 2030, the strategy must transition from pilot projects to universal and sustained vaccination. The Goal: Vaccinate $\geq 70\%$ of *all* dogs (pets and strays) *every single year*. Sustaining this level for 3–4 years is what breaks the transmission chain. Focus: Micro-planning: Instead of state-level data, implementation must move to village and ward-level mapping. Every urban local body and rural panchayat needs a specific dog-to-human population estimate and a detailed, time-bound plan for vacuuming and vaccinating.

- **Focus: "Capture-Vaccinate-Release" (CVR) and Oral Vaccines:** For hard-to-capture strays, traditional net-catching is too slow. Investment must scale up in Oral Rabies Vaccines (ORV)—safe, palatable baits that strays can consume. This technology is essential for covering the final 10–15%

of the most elusive dogs.

- **Focus: Public-Private Partnerships:** The government cannot catch every dog. Municipalities must build formal, long-term contracts with specialised veterinary NGOs and private companies for sustained, data-backed MCV campaigns.

Pillar 2: Human Prevention – Closing the Post-Exposure Prophylaxis (PEP) Gap No one should die from rabies. While vaccination is the long-term solution, robust human prophylaxis is the immediate life-saving priority.

- **Focus: The "No Doubts" Administration:** This is the healthcare guideline that mandates: "When in doubt, vaccinate." Every healthcare professional (especially in PHCs) must be trained to administer PEP (both vaccine and immunoglobulin/RIG) immediately to any bite victim, without waiting for the animal to show signs of sickness.
- **Focus: Intradermal (ID) Regimens:** This is the most cost-effective and dose-sparing method. All government facilities must be mandated to use the modern, WHO-approved ID regimens, which reduce vaccine volume and cost while maintaining efficacy.
- **Focus: Supply Chain Management for Immunoglobulin:** Rabies Immunoglobulin (RIG) is essential for category III bites (deep punctures/multiples) but is frequently out of stock. State healthcare must invest in decentralised procurement to ensure a minimum buffer stock of RIG in all Primary Health Centres.

Pillar 3: Inter-sectoral Collaboration (One Health Approach)- Eradication is impossible if human health and animal health departments work in silos. This integrated response needs to become the standard operational procedure.

- **Focus: Real-time Surveillance & Communication:** A bite victim is reported at a human hospital. The hospital must immediately alert the local veterinary team. That team must then find and test the suspected animal. This integrated digital surveillance loop is the *only* way to find and stamp out small clusters of disease.
- **Focus: Comprehensive Dog Population Management (DPM):** Mass vaccination must be coupled with humane dog population management. This means Animal Birth Control (ABC)—sterilisation programs that are efficient, humane, and standardised, overseen by the Animal Welfare Board of India. A smaller, stable dog population is far easier to keep 70% vaccinated than an endlessly growing one.

Operational: Turning the Strategy into Action

- **Focus: Data, Technology, and Accountability.**

The years 2026–2030 must be data-obsessed. Eradication will not be achieved on goodwill; it will be achieved on reliable data. A National Dog Registry: Every municipal corporation must have

a digital database of dogs, moving from estimates to actual recorded counts. Digital Campaign Tracking: No more "number of vaccines distributed." MCV campaigns must provide data that shows: "GPS locations of every vaccinated stray," "the percentage of the population covered in this specific neighbourhood," and "the dates of the last campaign." Annual District-level Accountability: District Magistrates (DMs) must be made personally accountable for meeting specific vaccination and PEP coverage targets in their annual performance reviews. The national government should rank districts based on their progress toward the "Zero by 30" goal.

- **Focus: Public Awareness and Community Education**

Eradication is not just a government problem; it is a community responsibility.

School Education: Integrate rabies prevention and responsible pet ownership (the importance of regular pet vaccination) into the national school curriculum.

First Aid Training: The first, most critical action is immediate and thorough wound washing (15 minutes with soap and running water). Mass media campaigns must focus relentlessly on this one simple, life-saving step, followed by immediate medical care.

Fighting Misinformation: Campaigns must counter myths (like "you only need vaccines for severe bites" or "traditional remedies work").