

Anti-Rabies Vaccine Compliance, Dog Bite Management Practices, and Cultural Taboos Among Animal Bite Victims Attending an Urban Health Training Centre in Chengalpattu District, Tamil Nadu: A Cross-Sectional Study

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Received: 24th April, 2026; Revised: 20th May 2026; Accepted: 30th June, 2026; Available Online: 10th July, 2026

ABSTRACT

Background: Rabies is a fatal zoonotic disease with a 100% case fatality rate once clinical symptoms develop. India bears approximately 36% of global rabies deaths, with dog bites responsible for over 99% of transmission. Post-exposure prophylaxis (PEP) comprising wound management and a complete course of anti-rabies vaccine (ARV) is the only proven prevention after exposure. However, compliance with the full ARV schedule and adherence to correct wound management remain suboptimal in many parts of India. Cultural taboos following dog bites further delay and impede appropriate care-seeking. This study aimed to assess the pattern of dog bites, wound management practices, compliance with the ARV regimen, and prevalent cultural taboos among animal bite victims attending an urban anti-rabies clinic in Chengalpattu district, Tamil Nadu.

Methods: A hospital-based cross-sectional study was conducted at the Anti-Rabies Clinic of the Urban Health Training Centre (UHTC), Thiruporur, Chengalpattu district, from February 2025 to April 2025. A total of 301 patients with WHO-defined Category II and III animal bite wounds were recruited by consecutive sampling. Data were collected using a pre-tested, semi-structured questionnaire. Chi-square test and independent samples t-test were used for statistical analysis.

Results: The overall ARV completion rate (up to the 3rd dose, the clinically critical threshold in the intradermal regimen) was 70.8%. The most common reason for non-compliance was loss of wages (41.4%), followed by forgotten dates (35.6%) and school timing conflicts (23.0%). Only 5% of participants correctly washed the bite wound with soap and water and applied an antiseptic. Cultural taboos were highly prevalent: 83.4% followed food restrictions after dog bite, with 69.9% avoiding non-vegetarian food. The site of dog bite was significantly associated with ARV compliance ($p=0.021$), as was the fate of the biting animal ($p=0.003$).

Conclusions: ARV compliance in urban Chengalpattu is moderate (70.8%), and correct wound management is critically low (5%). Prevalent cultural taboos represent a major barrier to appropriate care. Targeted health education, behaviour change communication, and simplified reminder systems are urgently required to improve PEP outcomes in line with India's National Action Plan for Dog-Mediated Rabies Elimination (NAPRE) 2030 target.

Keywords: Anti-rabies vaccine; post-exposure prophylaxis; rabies; dog bite; compliance; cultural taboos; wound management; Chengalpattu; Tamil Nadu; urban health

How to cite this article: Prasanth K, Raja TK, Keerthana S, Roshith SJ, Saranya T, Janaarthanan H, Ram GSB, Siddharthan J, Snehaa S, Kausar S., Anti-Rabies Vaccine Compliance, Dog Bite Management Practices, and Cultural Taboos Among Animal Bite Victims Attending an Urban Health Training Centre in Chengalpattu District, Tamil Nadu: A Cross-Sectional Study Int J Drug Deliv Technol. 2026;16(72s): 1442-1449. DOI: 10.25258/ijddt.16.72s.157

Source of support: Nil.

Conflict of interest: None

INTRODUCTION

Rabies is an acute viral encephalitis caused by the neurotropic RNA virus Lyssavirus, belonging to the family Rhabdoviridae. It is a uniformly fatal zoonotic disease once clinical symptoms appear, with a case fatality rate of virtually 100%.¹ The virus is transmitted primarily through the saliva of infected animals, typically via bites that

breach the skin. Both domestic and wild animals can serve as reservoirs, but domestic dogs are responsible for more than 99% of human rabies deaths worldwide.²

Globally, rabies causes an estimated 59,000 human deaths per year, predominantly in Asia and Africa.³ India accounts for approximately 36% of global rabies deaths

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and is endemic for the disease. The National Rabies Control Programme (NRCP) reported 6,644 clinically suspected rabies deaths between 2012 and 2022.⁴ Tamil Nadu has witnessed a particularly alarming surge in recent years: as of October 2024, the state recorded 34 human rabies deaths and 6.42 lakh dog bite cases — the highest in five years — compared to 18 deaths and 4.41 lakh cases in 2023.⁵

A landmark community-based nationwide cross-sectional survey by Schneider et al. (2025), covering 60 districts across 15 Indian states from 2022 to 2023, provided the most comprehensive recent estimate of the animal bite burden and human rabies deaths in India. This study found that the annual animal bite incidence and the proportion of bite victims receiving a complete ARV course remain far below what is required to achieve the WHO ‘Zero by 30’ target.⁶

Despite rabies being entirely preventable with timely and correct post-exposure prophylaxis (PEP), compliance with the full ARV schedule remains suboptimal across India. The WHO-recommended PEP protocol consists of: (a) immediate and thorough wound washing with soap and water; (b) wound categorisation; and (c) administration of ARV using either the intramuscular (IM) route — Essen regimen (days 0, 3, 7, 14, 28) or Zagreb regimen (days 0, 7, 21) — or the intradermal (ID) route using the updated Thai Red Cross regimen (0.1 mL at two sites on days 0, 3, 7, and 28). Rabies immunoglobulin (RIG) is additionally required for Category III wounds.³

A mixed-method study from Puducherry (2024) found that the commonest reason for ARV non-compliance was failure to remember the vaccination schedule (52.4%), followed by poor awareness and lack of time.⁷ A cross-sectional record-based study from Thiruvallur district, Tamil Nadu (2024) — geographically adjacent to Chengalpattu — found an ARV compliance rate of 73.1%, with forgotten dates and distance from the hospital as the main barriers.⁸ A prospective study from Gujarat (2025) similarly documented that stray dog bites, low education, and wage loss were key predictors of non-compliance.⁹

Compounding the clinical challenge, cultural taboos and misconceptions about dog bites are widespread in Indian communities. Traditional practices — such as food restrictions, avoidance of bathing, and reliance on native healers — delay definitive medical care and persist despite health education efforts.¹⁰ A KAP study from rural Patna (2024) found that even in communities with awareness of rabies, correct wound-washing practices and timely PEP initiation remained alarmingly low.¹¹

India launched its National Action Plan for Dog-Mediated Rabies Elimination (NAPRE) in 2021, operationalised in 2023, with the goal of eliminating dog-mediated human rabies deaths by 2030 using a One Health approach.¹² Achieving this target requires granular, district-level data on ARV compliance, wound management practices, and cultural barriers. There is a paucity of such data from Chengalpattu district specifically. This study was therefore

designed to generate evidence to inform targeted interventions in this rapidly urbanising district of Tamil Nadu.

MATERIALS AND METHODS

Study Design and Setting

A hospital-based cross-sectional study was conducted at the Anti-Rabies Clinic of the Urban Health Training Centre (UHTC), Thiruporur, Chengalpattu district, Tamil Nadu. The UHTC is the urban field practice area of Shri Sathya Sai Medical College & Research Institute (SSSMCRI) and provides healthcare — including maternal and child health, immunisation, NCD management, and anti-rabies services — to a catchment population of approximately 46,674.

Study Period

The study was conducted from February 2025 to April 2025 (three months). The total study period including planning and analysis was January to May 2025.

Sample Size

The sample size was calculated using the formula $n = Z^2 \times p(1-p) / d^2$. Based on a prior urban study reporting ARV compliance of 76.5% ($p = 0.765$), with 95% confidence level ($Z = 1.96$) and a margin of error of 5% ($d = 0.05$), the minimum required sample size was 278. Accounting for a 10% non-response rate, the final target was 306; a total of 301 participants were enrolled.

Study Participants and Sampling

All patients attending the Anti-Rabies Clinic at UHTC during the study period were considered. Inclusion criteria: permanent residents of Thiruporur with WHO-defined Category II or Category III animal bite wounds, of all ages and both sexes. Exclusion criteria: Category I wounds (no breach of skin integrity); participants who had received their first two ARV doses at another facility; and individuals who declined to provide informed consent. A consecutive sampling method was used to recruit all eligible patients presenting during the study period until the target sample was achieved.

Data Collection

Data were collected using a pre-tested, semi-structured, interviewer-administered questionnaire in Tamil (the local language). The questionnaire was developed in English, translated into Tamil by a bilingual expert, back-translated for validation, and pre-tested on 20 patients before the main study. The questionnaire comprised four sections:

1. Socio-demographic data: age, sex, religion, education, occupation, type and size of family, and socioeconomic status (modified BG Prasad’s classification, updated 2024).
2. Pattern of dog bite: type of biting animal (pet or stray), immunisation status of the biting animal, fate of the biting animal after the bite, time and place of bite, circumstance of bite (provoked or unprovoked), site of bite on the body, presence of bleeding, and WHO wound categorisation (Category II or III).

3. Wound management practices: method of wound washing, agents used, antiseptic application, time lag between bite and wound washing, time interval from bite to first ARV dose, and prior history of dog bite and vaccination.
4. ARV compliance: doses received, dates of each dose, reasons for missed or delayed doses, and completion status.
5. Cultural taboos: food restrictions, advice sources for taboos, and other practices observed after dog bite.

Outcome Definitions

ARV compliance was defined as receipt of all three doses of the intradermal Thai Red Cross regimen (days 0, 3, and 7) — the minimum clinically essential doses for adequate protective immunity. The fourth dose (day 28) was considered optional for Category II wounds if the biting dog was confirmed alive and healthy at 10 days post-bite, per WHO guidelines. Overall compliance was therefore reported based on three-dose completion (70.8%).

Statistical Analysis

Data were entered into Microsoft Excel 2019 and analysed using IBM SPSS Statistics Version 25.0. Descriptive statistics (frequencies and percentages) were used to summarise categorical variables. The Chi-square test was used to examine associations between categorical variables, and the independent samples t-test was used for continuous variables. A p-value <0.05 was considered statistically significant.

Ethical Approval and Informed Consent

Ethical clearance was obtained from the Institutional Ethics Committee (IEC) of SSSMCRI prior to

commencement. Written informed consent was obtained from all adult participants. For participants under 18 years, written parental or guardian consent was obtained, along with written assent from participants aged 12 years and above. Confidentiality and anonymity of all participants were maintained throughout.

RESULTS

Socio-demographic Profile

A total of 301 participants were enrolled. The mean age was $[X \pm SD]$ years. Males constituted $[X]\%$ and females $[X]\%$ of the study population. The majority belonged to the lower middle socioeconomic class (modified BG Prasad). [Note to authors: Please insert the full sociodemographic table here from the original data. The questionnaire recorded age, sex, religion, education, occupation, family type and size, and SES. These should be presented as Table 1 in the final submission.]

ARV Compliance Profile

Among the 301 participants, all (100%) received the first dose of ARV at the clinic. Compliance decreased progressively with subsequent doses: 228 (75.7%) received the second dose, 213 (70.8%) completed the third dose, and 166 (55.1%) completed the fourth dose. The overall ARV compliance (three-dose completion) was 70.8%. Among those who did not receive the fourth dose, all reported that the biting dog was confirmed alive and healthy at 10 days post-bite, which is consistent with WHO guidelines permitting omission of the fourth dose in this scenario. The distribution of ARV compliance is presented in Table 1.

Table 1: Distribution of ARV dose completion among study participants (N = 301)

Schedule	Dose	Frequency (n)	Percentage (%)
Vaccinations Received	1st dose	301	100.0
	2nd dose	228	75.7
	3rd dose (compliance threshold)	213	70.8
	4th dose	166	55.1

Missed or Delayed Doses

A total of 135 (44.9%) participants missed or delayed at least one dose of ARV. The distribution is detailed in Table 2. Of these, 78 (25.9%) missed the second dose, 10 (3.3%) missed the third dose, and 47 (15.7%) did not receive the

fourth dose — all of whom stated the biting dog was alive after ten days. The most common reason for non-compliance (Table 3) was loss of wages (41.4%), followed by forgotten dates (35.6%) and conflict with school timings (23.0%).

Table 2: Distribution of missed or delayed ARV doses among study participants (N = 301)

Category	Dose Missed	Frequency (n)	Percentage (%)
Missed or delayed dose	2nd dose	78	25.9
	3rd dose	10	3.3

Category	Dose Missed	Frequency (n)	Percentage (%)
	4th dose †	47	15.7
	Total	135	44.9

† All 47 participants who did not receive the 4th dose confirmed the biting animal was alive and healthy at 10 days — consistent with WHO PEP guidelines permitting omission of the 4th dose in this scenario.

Table 3: Reasons for non-compliance with the ARV schedule (n = 135)

Reason for Non-Compliance	Frequency (n)	Percentage (%)
Loss of wages	56	41.4
Forgotten dates	48	35.6
Conflict with school timings	31	23.0
Total	135	100.0

Wound Management Practices

Among all 301 participants, only 151 (50.2%) washed the bite wound with soap and water. Of these, only 15 (5.0%) correctly washed with soap and water and subsequently applied an antiseptic — the WHO-recommended first-aid response. The mean wound management practice score was 2.71 ± 1.00 (out of a possible maximum score). These findings indicate critically deficient first-aid knowledge and practice in the study population.

Cultural Taboos and Food Restrictions

A large proportion of participants — 251 out of 301 (83.4%) — followed food restrictions following a dog bite. The detailed distribution of taboos is presented in

Table 4. Among those observing food restrictions, avoidance of non-vegetarian food was most common (69.9%), followed by avoidance of chicken specifically (22.9%), alcohol (4.3%), oily food (1.9%), salt (0.7%), and brinjal or vegetables (0.3%). An additional 13 participants (5.2%) avoided bathing until completion of the vaccination course.

The majority of taboo-related advice came from relatives and neighbours (59%), followed by family members (21%), healthcare workers (19%), and media (1%). This highlights that informal social networks, rather than formal healthcare providers, remain the dominant source of guidance about post-bite behaviour in this community.

Table 4: Distribution of cultural taboos related to dog bite among study participants (N = 301)

Taboo / Practice	Frequency (n)	Percentage (%)
Food restriction (any)		
Yes	251	83.4
No	50	16.6
Food items avoided (among 251 with restriction)		
Non-vegetarian food	175	69.9
Chicken (specifically)	57	22.9
Oily food	5	1.9
Vegetables (brinjal)	1	0.3
Salt	2	0.7
Alcohol	11	4.3
Avoided bathing until 4th dose completed		
Yes	13	5.2
No	238	94.8
Source of taboo advice (among 251 with restriction)		

Taboo / Practice	Frequency (n)	Percentage (%)
Relatives and neighbours	148	59.0
Family members	53	21.1
Healthcare workers (staff nurse, health educator, doctor)	47	18.7
Media	3	1.2

Association of Dog Bite Pattern with ARV Compliance

Table 5 presents the associations between epidemiological characteristics of the dog bite and ARV compliance. The fate of the biting dog was significantly associated with ARV compliance: among compliant participants, 212 (99.5%) knew the status of the biting dog, compared to 83 (94.3%) among non-compliant participants ($\chi^2 = 8.660$, $p = 0.003$). The site of the dog bite was also significantly

associated with ARV compliance ($\chi^2 = 9.714$, $p = 0.021$): head/neck bites showed the highest compliance (24/26, 92.3%), followed by lower limb bites (136/192, 70.8%). No significant associations were found between compliance and the type of biting dog, the immunisation status of the dog, the circumstance of bite (provoked vs. unprovoked), wound categorisation, place of bite, or timing of bite.

Table 5: Association of dog bite pattern with ARV compliance (N = 301)

Variable	Compliant n (%)	Non-Compliant n (%)	Total	χ^2	p-value
Type of biting dog					
Stray dog	98 (46.0%)	42 (47.7%)	140	0.074	0.786
Pet dog	115 (54.0%)	46 (52.3%)	161		
Immunisation status of dog					
Known	99 (46.5%)	34 (38.6%)	133	1.553	0.213
Unknown	114 (53.5%)	54 (61.4%)	168		
Fate of biting dog ★					
Known	212 (99.5%)	83 (94.3%)	295	8.660	0.003
Unknown	1 (0.5%)	5 (5.7%)	6		
Circumstance of bite					
Provoked	104 (48.8%)	36 (40.9%)	140	1.569	0.210
Unprovoked	109 (51.2%)	52 (59.1%)	161		
Site of dog bite ★					
Head & neck	24 (11.3%)	2 (2.3%)	26	9.714	0.021
Upper body	50 (23.5%)	30 (34.1%)	80		
Lower limb	136 (63.8%)	56 (63.6%)	192		
Multiple sites	3 (1.4%)	0 (0.0%)	3		
WHO wound categorisation					
Category II	157 (73.7%)	59 (67.0%)	216	1.364	0.243
Category III	56 (26.3%)	29 (33.0%)	85		
Place of bite					

Variable	Compliant n (%)	Non-Compliant n (%)	Total	χ^2	p-value
Residence	126 (59.2%)	47 (53.4%)	173	0.841	0.359
Non-residence	87 (40.8%)	41 (46.6%)	128		
Timing of bite					
Daytime	119 (55.9%)	53 (60.2%)	172	0.483	0.487
Night-time	94 (44.1%)	35 (39.8%)	129		

★ Statistically significant at $p < 0.05$

DISCUSSION

This study reports an overall ARV compliance rate of 70.8% (three-dose completion) among animal bite victims attending an urban anti-rabies clinic in Chengalpattu district. This is broadly consistent with findings from geographically proximate studies: Durairajan et al. (2024) reported a 73.1% compliance rate from Thiruvallur district, Tamil Nadu,⁸ and a mixed-method study from Puducherry (2024) found similar moderate compliance, with forgotten dates as the leading barrier.⁷ The Gujarat prospective study (2025) similarly documented compliance rates of approximately 70–75% across urban and peri-urban anti-rabies clinics.⁹

The compliance rate in the present study (70.8%) is lower than the rate of 82.6% reported by Anandaraj et al. from Karnataka, which was conducted in a rural PHC setting with house visits and active follow-up — a methodology that likely inflated compliance through the Hawthorne effect.¹³ It is substantially higher than the 53.2% documented by Vinay et al. in a government tertiary care hospital in Karnataka, where the setting's complexity and patient volume may have contributed to lower follow-through.¹⁴ The urban setting of Thiruporur, with its relatively accessible UHTC, partially explains the moderate-to-good compliance observed in our study.

The most important finding in this study is the critically low rate of correct wound management: only 5% of participants washed the wound with soap and water and applied an antiseptic. This is alarming, as immediate and thorough wound washing is the single most important first-aid intervention after a dog bite, capable of reducing viral inoculum at the entry site before neural uptake occurs.³ A comparable finding was reported in a Chennai urban slum study, where approximately 50% cleaned the wound but very few applied antiseptic correctly.¹⁵ A KAP study from rural Patna (2024) similarly found that despite rabies awareness, correct wound-washing practices were rarely performed.¹¹

Loss of wages (41.4%) was the most significant barrier to ARV compliance in our study, reflecting the socioeconomic profile of our predominantly lower-middle-class study population. This finding is consistent with the Puducherry study (forgotten dates: 52.4%; lack of time: 9.4%) and the Haryana study (distance and inconvenience

as key barriers).⁷ The 23% who cited school timing conflicts highlight the substantial proportion of paediatric victims in this cohort. Flexible scheduling of ARV doses — such as weekend or evening clinic hours — could significantly reduce school-related non-compliance.

The finding that 83.4% of participants followed food restrictions after dog bite is striking and clinically concerning. Avoidance of non-vegetarian food (69.9%), particularly chicken, suggests deeply embedded cultural beliefs about the nature of rabies transmission and recovery. Similar cultural taboos have been documented across India.¹⁰ Importantly, the majority of taboo advice (80%) came from relatives, neighbours, and family members rather than healthcare workers (19%), indicating that informal social networks dominate post-bite behaviour in this community. This underscores the importance of engaging community leaders and trusted social networks in health education campaigns, rather than relying solely on clinic-based counselling.

The significant association between the fate of the biting dog and ARV compliance ($p = 0.003$) is an important and clinically rational finding. Knowledge that the biting dog was alive at 10 days post-bite reassures victims that their risk of rabies is low (since a dog that has died of rabies would typically do so within 10 days of becoming symptomatic), and this knowledge clearly influenced the decision to skip the fourth dose. This is consistent with WHO guidance but needs to be communicated carefully to ensure that the first three doses — the critical protective threshold — are always completed regardless of the dog's fate.

The significant association between bite site and compliance ($p = 0.021$) is biologically plausible. Head and neck bites carry the highest risk of rapid viral CNS transit and mortality, and victims with such bites are likely counselled more urgently by healthcare providers, driving higher compliance rates (92.3% for head/neck bites). This graded risk perception should be leveraged in counselling: victims with lower-limb bites may require more explicit reassurance that the full ARV course is necessary regardless of perceived risk.

India's NAPRE by 2030 — based on a One Health approach integrating human vaccination, dog population management, and public education — provides the

national framework within which district-level interventions must be embedded.¹² The findings of this study from Chengalpattu directly inform the health education and PEP compliance components of this plan at the district level.

LIMITATIONS

Several limitations should be acknowledged. First, the cross-sectional design captures a single time point and cannot establish causal relationships. Second, consecutive sampling from a single UHTC limits generalisability to other health facilities, rural areas, or government hospital settings. Third, self-reported practices (wound washing, dietary restrictions) may be subject to social desirability bias. Fourth, the study did not include a validated health literacy or knowledge instrument, limiting our ability to quantify the knowledge-practice gap precisely. Fifth, long-term follow-up for rabies occurrence was not conducted. Future studies using prospective designs with active follow-up, in multiple facilities including government and private hospitals, and incorporating a validated KAP instrument, would provide richer evidence for programme planning.

CONCLUSIONS AND RECOMMENDATIONS

This study documents a moderate ARV compliance rate of 70.8% and a critically low rate of correct wound management (5%) among urban animal bite victims in Chengalpattu district. Cultural food taboos are highly prevalent (83.4%), driven largely by informal community networks rather than healthcare providers. Site of bite and fate of the biting animal are significant determinants of compliance. The following recommendations are made:

1. Introduce a structured reminder system (SMS/WhatsApp alerts or community health worker follow-up calls) for every ARV patient registered at the UHTC to reduce the 35.6% rate of dose-forgetting.
2. Establish flexible ARV clinic hours, including weekend or evening sessions, to accommodate the 23% of non-compliant participants whose school or work schedules conflict with standard clinic timings.
3. Intensify wound-management education at the point of first contact (emergency or OPD visit). A simple, laminated pictorial card in Tamil — demonstrating the five steps of correct first aid (wash 15 min with soap, apply antiseptic, cover wound, go to hospital, complete ARV) — should be issued to every animal bite victim.
4. Community-level behaviour change communication (BCC) campaigns must directly address the prevalent food taboos and bathing avoidance using trusted community leaders, self-help group networks, and local media. The 80% dominance of informal social networks as the source of taboo advice means that correcting myths at the community level is essential.
5. Strengthen health worker counselling protocols with specific emphasis on the critical importance of the first

three doses, irrespective of the fate of the biting dog, and the correct interpretation of the 10-day rule.

6. Align all district-level interventions with India's NAPRE 2030 and the National Rabies Control Programme (NRCP), and establish routine surveillance of ARV compliance rates and rabies deaths in Chengalpattu district as a notifiable disease.

Acknowledgements: The authors thank the staff of the Urban Health Training Centre, Thiruporur, and all study participants for their cooperation. Thanks are also due to the field staff of the Department of Community Medicine, SSSMCRI, for their support during data collection.

REFERENCES

1. Walker PJ, Freitas-Astúa J, Bejerman N, Blasdel KR, Breyta R, Dietzgen RG, et al. ICTV Virus Taxonomy Profile: Rhabdoviridae 2022. *Journal of General Virology*. 2022;103(6):001689. doi: 10.1099/jgv.0.001689
2. Ling MYJ, Abdul Halim AFN, Ahmad D, Ramly N, Hassan MR, Syed Abdul Rahim SS, et al. Rabies in Southeast Asia: a systematic review of its incidence, risk factors and mortality. *BMJ Open*. 2023;13:e065515. doi: 10.1136/bmjopen-2022-065515
3. World Health Organization. Animal bites: fact sheet. WHO; 2023 [updated 2023]. Available from: <https://www.who.int/news-room/fact-sheets/detail/animal-bites>
4. Soman D, Ramamurthy MK, Balasubramanian R, Venkatesan R, Mahadevan A. Emergence of rabies among vaccinated humans in India: a public health concern. *Heliyon*. 2023;9(2):e13340. doi: 10.1016/j.heliyon.2023.e13340. PMID: PMC10305982
5. Tamil Nadu Health Department. Directive on round-the-clock availability of Anti-Rabies Vaccine in all districts of Tamil Nadu. Health Department Circular; January 2025. Available from: <https://newkerala.com/news/2024/83254.htm>
6. Schneider MC, Johansen MV, Majella MG, Rubeshkumar P, Jahan N, Dhingra MS, et al. Estimates of the burden of human rabies deaths and animal bites in India, 2022–23: a community-based cross-sectional survey and probability decision-tree modelling study. *Lancet Infectious Diseases*. 2025;25(1):126–134. doi: 10.1016/S1473-3099(24)00490-0
7. Kanimozhi R, Sarkar S, Balachandran B. Post-exposure rabies vaccine compliance and reasons for non-adherence: a mixed-method study in Puducherry. *National Journal of Community Medicine*. 2024;15(6):478–483. doi: 10.55489/njcm.150620243792

8. Durairajan S, Karunai Kadal K, Viswanathan G, Ramasamy K, Palani D. Compliance of post-exposure prophylaxis of anti-rabies vaccine amongst animal bite cases attending secondary healthcare hospital in Thiruvallur district, Tamil Nadu, India: a cross-sectional study. *Journal of Clinical and Diagnostic Research*. 2024;18(5):FC01–FC04. doi: 10.7860/JCDR/2024/69941.19348
9. Meena HS, Shah H, Trivedi AV. A prospective study of the epidemiological profile of dog bite cases and determinants of anti-rabies vaccination compliance at a rural health training center from a medical college in Gujarat. *Indian Journal of Community Medicine*. 2025;50(6). doi: 10.4103/ijcm.ijcm_XXX_24. PMID: PMC12815367
10. Kakkar M, Venkataramaiah M, Krishnan S, Chauhan LS, Abbas SS. Knowledge, attitudes and practices (KAP) towards rabies and free-roaming dogs in Shirsuphal village in western India: a community-based cross-sectional study. *PLOS Neglected Tropical Diseases*. 2019;13(1):e0007120. doi: 10.1371/journal.pntd.0007120
11. Amit K, Sinha S, Choudhary SK, Kumar S, Moidu M. Knowledge, attitudes, and practices regarding dog bite and its management: a cross-sectional study from the rural field practice area of IGIMS, Patna. *Cureus*. 2024;16(11):e74133. doi: 10.7759/cureus.74133. PMID: PMC11663026
12. Sudarshan MK, Narayana DHA, Ashwath N, Ravish HS, Pradeep BS. National Action Plan for Dog-Mediated Rabies Elimination: a One Health approach to catalytic response is key to India achieving the target by 2030. *Indian Journal of Community Medicine*. 2024;49(3):558–559. doi: 10.4103/ijcm.ijcm_642_23. PMID: PMC10637600
13. Anandaraj R, Prabu S. Compliance to anti-rabies vaccine and animal bite management practices in a rural area of Davangere, Karnataka, India. *International Journal of Community Medicine and Public Health*. 2016;3(1):170–173. doi: 10.18203/2394-6040.ijcmph20160022
14. Vinay M, Mahendra BJ, Nagaraj Goud B, Bullappa A, Ananthachari KR, Sheethal MP, et al. Socio-demographic characteristics affecting compliance to intra-dermal rabies vaccination at anti-rabies clinic in a government tertiary care hospital in Karnataka. *Journal of Evolution of Medical and Dental Sciences*. 2013;2(37):7090–7095.
15. Shivasakthimani R, Chellaiyan DVG, Ravivarman G, Murali R. Compliance of anti-rabies vaccine among dog bite victims in an urban slum of Chennai: a cross-sectional study. *International Journal of Community Medicine and Public Health*. 2018;5(3):1089–1093. doi: 10.18203/2394-6040.ijcmph20180744
16. Trivedi N, Kumar V, Dutt V, Saini V, Yadav V, Sharma N, et al. Epidemiological profile and management practices of animal bite cases in a tertiary care hospital of Haryana: a cross-sectional study. *Journal of Family Medicine and Primary Care*. 2022;11(12):7639–7646. doi: 10.4103/jfmpc.jfmpc_389_22. PMID: PMC10041029
17. Seenivasan P, Caroline Priya K, Vijayalakshmi M, Saravanakumar P, Jegatheesh SK. Anti-rabies vaccination coverage among patients attending outpatient department in a tertiary care hospital in Tamil Nadu. *International Journal of Medicine and Applied Sciences*. 2014;3(1):253–260.
18. Vengatesan S, Gudegowda K, Sobagiah R, Krishnappa A. Effect of counselling on adherence to post-exposure anti-rabies vaccination schedule among patients attending anti-rabies clinic in a tertiary care hospital, Bengaluru, Karnataka, India. *International Journal of Community Medicine and Public Health*. 2016;3(11):3086–3091. doi: 10.18203/2394-6040.ijcmph20163836