STATE ACTION PLAN FOR
DOG MEDIATED RABIES ELIMINATION
FROM TAMIL NADU BY 2030

GOVERNMENT OF TAMIL NADU
HEALTH AND FAMILY WELFARE DEPARTMENT

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DOG MEDIATED RABIES ELIMINATION
FROM TAMIL NADU BY 2030

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Foreword

Tamil Nadu state is the pioneer in all aspects of diseases control. Tamil Nadu is always a model state in implementing all programmes successfully. Many of the old traditional diseases like malaria, Lymphatic filariasis are on the verge of Elimination. Rabies is one among the disease on elimination list for which all sustainable activities have been carried out "**under one health**".

Rabies is a public health concern and the post exposure prophylaxis by effective vaccination strategy along wound management plays a pivotal role in prevention and effective control of rabies. In order to achieve this target of elimination of Dog Mediated Human Rabies there should be determined inter departmental coordination and co-operation of all stakeholders for Rabies free society by 2030.

I congratulate the team of this Directorate & other Department Officials / Stakeholders who devised this action plan for their un-tiredly effort and ensured that every contents of this plan are in alignment with National Rabies Control Programme, Ministry of Health & Family Welfare, Govt., of India and UNDP time to time until finalisation.

I sincerely hope that this booklet will serve as a useful document for the district health care professionals who are in the execution of dog mediated human rabies elimination in respect of Tamilnadu state by 2030.

27/9/24

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ABBREVIATIONS

ABC Program	Animal Birth Control Program
APCRI	Association for Prevention and control of Rabies in India
ARC	Anti-Rabies Clinic
ASCAD	Assistance to States for Control of Animal Diseases
AH&VS	Animal Husbandry and Veterinary Services
AWBI	Animal Welfare Board of India
ABC-ARV	Animal Birth Control and Anti-Rabies Vaccination
CIF	Case Investigation Format
CNS	Central Nervous System
CSF	Cerebrospinal Fluid
CNVR	Catch-Neuter-Vaccinate-Release
CDWC	Community Dog Welfare Committee
DAHD	Department of Animal Husbandry and Dairying
DFA	Direct Fluorescent Antibody Assay
DPM	Dog Population Management
DRIT	Direct Rapid Immunohistochemical Test
ELISA	Enzyme Linked Immunosorbent Assay
FAO	Food and Agriculture Organization
FRD	Free Roaming Dog
FRDs	Free-Roaming Dogs
GARC	Global Alliance for Rabies control
HRIG	Human Rabies Immunoglobulins`
IBCM	Integrated Bite Case Management
ICAM	International Companion Animal Management
IHIP	Integrated Health Information Platform

IM	Intramuscular
LFA	Lateral Flow Assay
LGBs	Local Governing Bodies
MoHFW	Ministry of Health & Family Welfare
MDV	Mass Dog Vaccination
NHM	National Health Mission
NCDC	National Centre for Disease Control
NGO	Non-Governmental Organisation
NADP	National Animal Disease Control Program
NRCP	National Rabies Control Program
NTD	Neglected Tropical Diseases
PCA	Prevention of Cruelty to Animals
PEP	Post-Exposure Prophylaxis
RFID	Radio-Frequency Identification Devices
RT	PCR Reverse Transcription Polymerase Chain Reaction
SBM	Swachh Bharat Mission
SDG	Sustainable Development Goal
SOP	Standard Operating Procedures
SRL	State Referral Laboratories
SWM	Solid Waste Management
TANUVAS	Tamil Nadu Veterinary and Animal Science University
UNDP	United Nations Development Programme
ULBs	Urban Local Bodies
WHO	World Health Organization

CONTENTS

1 Historical Perspective of Rabies in India

Introduction

Rabies is a preventable viral disease most often transmitted through the bite of a rabid animal. Rabies virus is a neurotropic virus which affects the Central Nervous System (CNS) of mammals, ultimately causing disease in the brain and death. Rabies lyssavirus, like many rhabdoviruses, has an extremely wide host range. The World Health Organization (WHO) identifies rabies as one among the Neglected Tropical Diseases (NTDs) that affects over a billion people globally. It primarily impacts those living in poverty in low and middle-income countries in the tropics and subtropics, thereby imposing a significant economic burden on such countries.

In most rabies-endemic countries in Africa and Asia, including India, domestic dogs are the main reservoir and source of human exposure to the disease.

Rabies is one of the NTDs that predominantly affects the already marginalized, poor and vulnerable populations. In the wild, it has been found to be infecting many mammalian species, while in the laboratory, it has been found that birds can be infected, as well as cell cultures from mammals, birds, reptiles, and insects can cause rabies. The disease is reported in more than 150 countries across continents with the exception of Antarctica. The main burden of the disease is reported in Asia and Africa, but some cases have also been reported in Europe, especially among travellers, in the past 10 years.

Rabies is almost 100 per cent fatal, but also 100 per cent preventable by proper vaccination of both humans and animals. As per WHO estimates, there are 59,000 human deaths globally due to dog-mediated rabies. India contributes to one third of the total global burden and two-third of the rabies burden in the South East Asia region as per the WHO-APCRI 2004 Survey.

Rabies is a vaccine-preventable, zoonotic, viral disease. Once clinical symptoms appear, rabies is 100 per cent fatal. In almost 99 per cent of the cases, domestic dogs are responsible for the transmission of rabies virus to humans. Rabies can affect both domestic and wild animals. It is spread to people and animals through bites or scratches usually via the saliva of a rabid animal.

The National Rabies Control Program (NRCP) implemented in India during the 11th Five Year Plan (FYP) to control the NTD brought rabies to the centre stage.

To achieve the global target of **Zero Human Dog- Mediated Rabies Death by**

2030, India has launched the National Action Plan for Dog Mediated Human Rabies Elimination (NAPRE) based on the 'One Health' approach in 2021. In adherence to the plan, a workshop was organized by the State of Tamil Nadu in Mahabalipuram in September 2023 in coordination with all line departments along with the National Centre for Disease Control (NCDC) and the United Nations Development Programme (UNDP) for the development of the State as well as the district action plans for dog-mediated rabies elimination by 2030.

National Rabies Control Program – Pilot Project, an initiative under the 11th Five Year Plan (14).

The efforts to control rabies in India gained momentum in the 11th FYP (2007–2012). Consequently, the Ministry of Health and Family Welfare, Government of India (GOI) approved a "Pilot Project for the Control of Human Rabies" for which Rs 8.65 crores were allocated. For the first time, focus was on rabies control in animals, animal birth control and vaccination of stray dogs all as components of animal welfare to be handled by the Animal Welfare Board of India. In 2015, four organizations namely WHO, OIE, FAO and GARC had joined forces to form the United Against Rabies Forum to reach this goal.

The objectives of the programme are:

- **Prevention of human deaths due to Rabies**
- **Enhancing awareness in the general community**
- **Developing trained health manpower**
- **Strengthening diagnostic facilities**
- **Strengthening surveillance and maintenance of continuous surveillance**

To achieve the objectives of the programme, and to eliminate rabies from Tamil Nadu, the involvement of other departments such as Animal Husbandry, Wildlife and local bodies is critical.

DEPARTMENTS TO BE INVOLVED FOR RABIES ELIMINATION IN TAMIL NADU

- Health and Family Welfare Department, Government of Tamil Nadu
- Animal Husbandry Department, Government of Tamil Nadu
- Tamil Nadu Veterinary University, Madhavaram, Chennai, Tamil Nadu
- Directorate of Municipal Administration
- Commissioner of Panchayat Raj, Government of Tamil Nadu
- Chief Conservator of Forests, Government of Tamil Nadu

2 Epidemiology of Rabies

Rabies is estimated to cause 59,000 human deaths annually in over 150 countries with 95 per cent of the cases occurring in Africa and Asia. Considering the widespread underreporting and uncertain estimates, it is likely that the number is a gross underestimation of the true burden of the disease. Ninety-nine per cent of rabies cases are dog- mediated and the burden of disease is disproportionately borne by rural populations, with approximately half of the cases affecting children under 15 years of age.

Global Burden

As per WHO estimates **20,565 human deaths occur due to rabies annually in India**. The country accounts for 59.9 per cent of rabies deaths in Asia and 35 per cent globally. But it has been observed that there is a huge gap between estimated and actual cases of rabies.

Rabies is a zoonotic disease prevalent in wildlife.

Europe: Fox, Bats

Middle East: Wolf, Dogs

Asia: Dog

Africa: Dog, Mongoose, Antelope

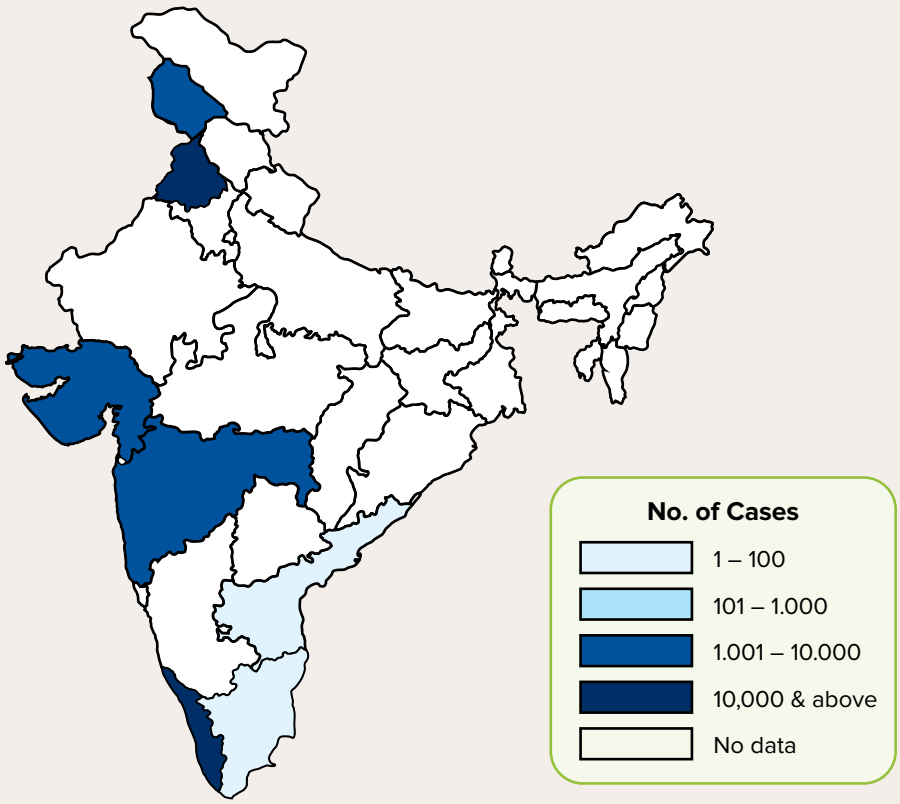
North America: Foxes, Shunks, Racoons, Insectivorous Bats.

South America: Dogs, Vampire Bats

Rabies in Asia and India

In India 97% of human rabies is due to **dog bite** and the remaining is attributed to cats and other wild animals. An estimated 35,712 human deaths i.e., 59.6 per cent occur per year in Asia due to dog mediated rabies. In India, rabies is endemic in all States/UTs except the Andaman and Nicobar, and Lakshadweep Islands. Although rabies affects people of all age groups, children are the most vulnerable, constituting 40 per cent of people exposed to dog bites in rabies-endemic areas.

The map on the next page is a choropleth map showing dog-bite cases in the States and Union Territories of India between January-October 2022, as extrapolated from local media reports. The map was created using QGIS 3.26.3. The base layer map was used from Survey of India.



Choropleth map showing dog-bite cases in the States and Union Territories of India - 2022

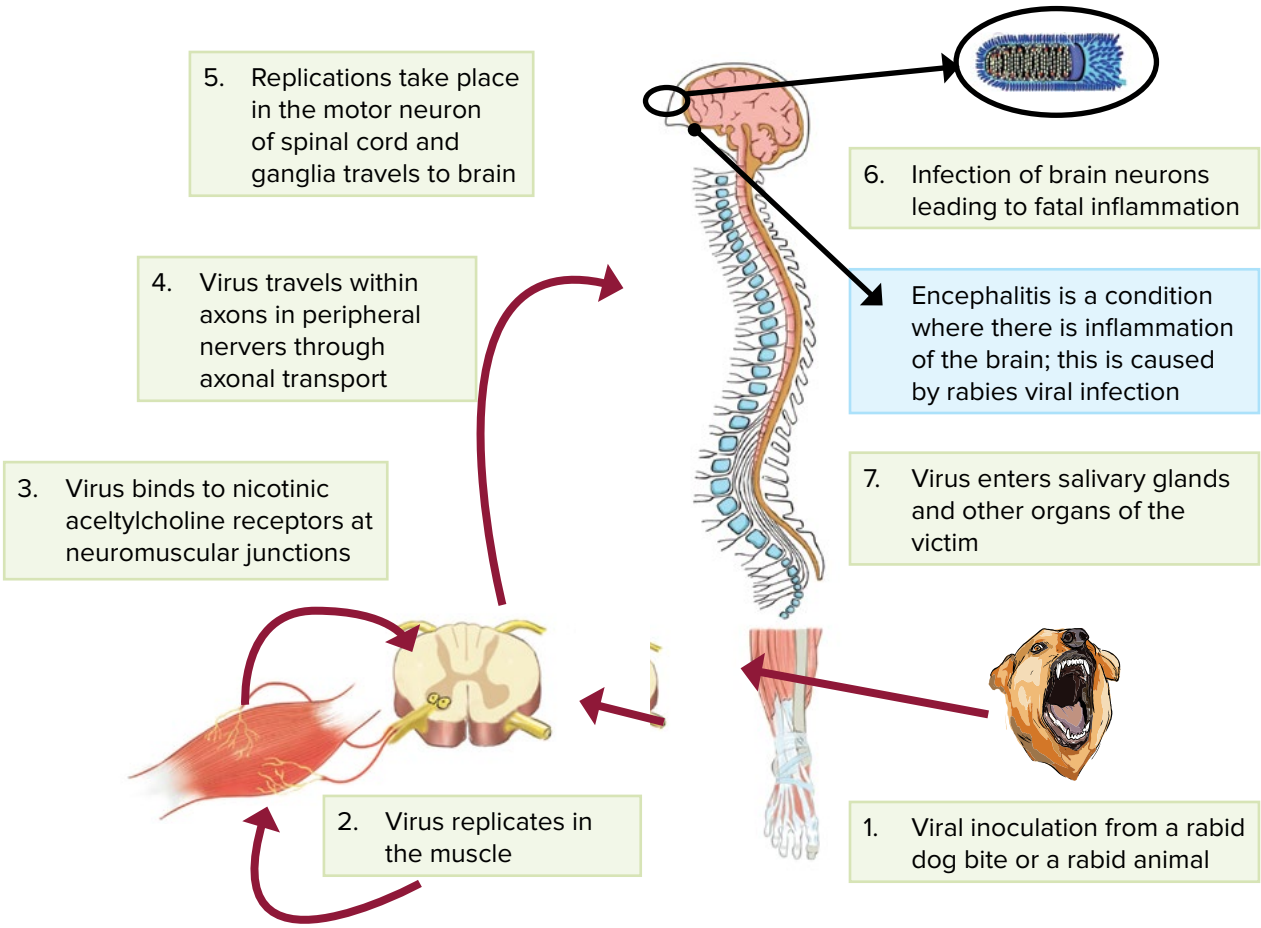
Rabies virus had been shown to infect all mammals tested so far. Dogs, cats and cattle are particularly susceptible. Skunks, bats, foxes, squirrels, badgers, raccoons, and mongooses are the principle wildlife hosts. Birds have also been shown to be susceptible to infection. Compartmentation occurs with rabies, which means the disease is reported in one major host species in certain geographical areas, while it is reported less frequently in the same species in other areas of endemic rabies.

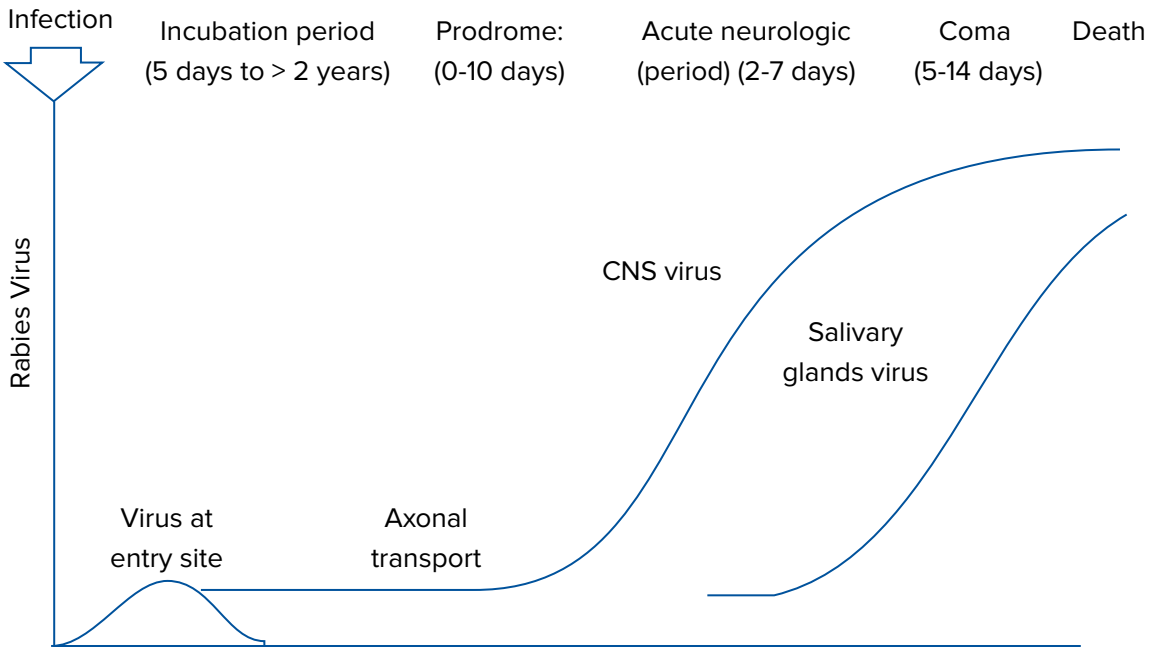
PATHOGENESIS

The commonest mode of rabies transmission in humans is by the bite of a rabid animal or the contamination of scratch wounds by virus- infected saliva. However, other routes of transmission have been found in the past such as through mucous membranes of the mouth, conjunctiva, anus and genitalia.

Infection by aerosol transmission has been demonstrated in experimental animals and has been implicated in human infection from rabies-infected bat caverns and several laboratory accidents. Human to human transmission by transplantation of infected corneas were also reported in a few instances. Rabies is an acute infection of the CNS which is almost invariably fatal.

Pathogenesis of Rabies





Rabies in Humans

Rabies is a viral disease that causes encephalitis in humans and other mammals. It was historically referred to as hydrophobia (fear of water) due to the symptoms of panic demonstrated when presented with liquids to drink. Early symptoms can include fever and tingling sensation at the site of exposure. These symptoms are followed by one or more of the following symptoms: Nausea, vomiting, violent movements, uncontrolled excitement, fear of water, an inability to move parts of the body, confusion, and loss of consciousness.

Once the symptoms appear, the result is virtually always death, regardless of the treatment. The period between contracting the disease and the beginning of symptoms is usually 1-3 months but can vary from less than a week to more than a year. The time depends on the distance the virus must travel along the peripheral nerves to reach the CNS.

A patient affected with rabies will manifest the following symptoms:

- Hydrophobia (Fear of water)
- Aerophobia (fear of air)
- Photophobia (fear of light)

Furious Rabies

Furious rabies results in hyperactivity, excitable behaviour, hallucinations, lack of coordination, hydrophobia (fear of water) and aerophobia (fear of drafts or of fresh air). Death occurs within a few days due to cardio-respiratory arrest.

Dumb Rabies

The paralytic form, also known as dumb or apathetic rabies, makes up one in five cases. The patient is characteristically quiet and lucid throughout. The course of the illness is a little more prolonged, beginning with tingling or paralysis of the bitten limb.

Incubation period

The **incubation period** (time lag between exposure to a rabid animal and the onset of rabid symptoms) of the disease varies from a few days to a few months in humans and depends on

1. **Site of exposure** – This affects the distance the virus has to travel to reach the CNS
2. **Severity of exposure** – The Severity of rabies exposure can vary based on several factors including the type of exposure and the location of the bite. Here are the main categories

Category-1 : No risk of rabies. This includes touching feeding animals, or licks on intact skin.

Category-2 : Moderate risk. This includes nobbling on uncovered skin, minor scratches or abrations without bleeding.

Category-3 : High risk. This includes single or multiple transdermal bites or scratches, contamination on mucous membrane or broken skin with saliva from animal licks, and exposure to bats.

Importance of One Health Approach

The 'One Health' approach calls for concerted and coordinated efforts by all stakeholders to combat rabies. Accordingly, NAPRE was conceptualized in 2018 by the Division of Zoonotic Disease Programme at NCDC and submitted to the ministry. A core committee was subsequently constituted under the chairmanship of Directorate General of Health Services (DGHS) and animal husbandry commissioners, which, in turn, was decentralized to form SAPRE across India.

To combat the seriousness of the disease, National Rabies Control Program was implemented in India during the 12th FYA for rabies control. To achieve zero human dog-mediated rabies deaths by 2030, India launched NAPRE based on the 'One Health' approach in 2021. Tamil Nadu has developed a comprehensive State-level Action Plan for Dog-Mediated Human Rabies Elimination (SAPRE) by 2030 based on the guidelines of NAPRE.

The activities related to the human health component are already being implemented under the National Rabies Control Program through the State and District Nodal Officer (SNO and DNO) under the National Health Mission.

- SAPRE envisages developing a dedicated toll-free number from the State solely to prevent dog mediated rabies.
- This toll-free number on accessing will provide essential information on animal and human rabies, dog bites, availability of rabies vaccine and immunoglobulins for the States and other partner organizations on real-time basis.
- The system would provide linkages between the health, veterinary, and wildlife sectors at an appropriate level, enabling the public to obtain information on dog mediated rabies.

"The goal of zero human rabies deaths by 2030 was adopted by the 'Ending the neglect to attain the Sustainable Development Goals: A road map for neglected tropical diseases 2021–2030' which had set global targets and milestones to prevent, control, eliminate or eradicate 20 diseases and disease groups, including rabies"

3 State Legislations

Rabies: A NOTIFIABLE DISEASE UNDER PUBLIC HEALTH ACT-1939

Diseases like rabies are highly infectious and fatal and affect multiple sectors (domestic animals, wildlife conservation, public health, modern services, and livestock economies); therefore, it is important to make sure that rabies does not spread. Notification will aid in rabies surveillance, providing better estimates of rabies burden and will also facilitate contact tracing and incorporation of prompt prophylactic measures to prevent infection in other people exposed to the same source. It will also aid in prompt identification of the emerging rabies foci in animals and the interventions needed to curtail the spread of the disease to other animals and humans.

Rabies is a notifiable disease in Tamil Nadu as per Section 62 of Public Health Act. 1939" (T.N.ACT III of 1939)

LEGISLATION CENTRAL LAWS

Laws and by-laws provide a solid foundation for the effective implementation of any disease control and elimination programme. The legislation allows the competent authority/stakeholders to bring about necessary actions required for early detection, and reporting and effective management of rabies. The actions required for active dog population management include capacity to:

1. Seize animals, vaccinate, quarantine
2. Control animal infiltration at borders
3. Effective elimination and safe disposal of potential rabies transmitting risk animal

The Prevention & Control of Infectious and Contagious Diseases in Animals Act, 2009

An Act to provide for the prevention, control and eradication of infectious and contagious diseases affecting animals for prevention of outbreak or spreading of such diseases from one State to another and to meet the international obligations of India for facilitating import and export of animals and animal products; and for matters connected therewith or incidental thereto.

Rabies is a scheduled* disease, under [See sections 2 (o) and 38], under (a), at no 15.

(As per chapter I, definitions at no 2, “scheduled disease” means any disease included in the Schedule).

Under chapter II, control of scheduled diseases, point 4 makes reporting scheduled diseases obligatory. — (1) * (*Every owner, or any other person, non-governmental organization, public bodies, or the village panchayat, in charge of any animal which he or it has reason to believe to be infective of a scheduled disease shall report the fact to the village officer or village panchayat in-charge, who may report the same in writing to the nearest available veterinarian).

Prevention of Animal Cruelty Act- 1960’ and the ‘Animal Birth Control (Dogs) Rules’, 2001

Purpose: Animal Birth Control (Dogs) Rules, 2001, is created under the Prevention of Animal Cruelty Act 1960 prescribing humane methodology for street dog population management, ensuring rabies eradication, and reduction in man–dog conflicts.

The Public Liability Insurance Act, 1991

Purpose: An Act to provide public liability insurance for providing immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto.

The Clinical Establishments (Registration and Regulation) Act, 2010

Purpose: The Act has been enacted by the Central Government to provide for registration and regulation of all clinical establishments in the country with a view to prescribe the minimum standards of facilities and services provided by them.

As per the law, the hospital shall maintain health information and statistics in respect of national programmes, notifiable diseases and emergencies/ disasters/ epidemics and furnish the same to the district authorities in the prescribed formats and frequency.

Reporting and notification

Reporting dog bites is crucial for effective treatment and dog management as it helps prevent the spread of diseases and ensures the safety of both the victim and the dog, In the lines of public health communicable diseases reporting, all medical practitioners should be mandated to report cases of dog bites through a designated web portal or toll-free number.

- As per WHO definition, any disease that is required by law to be notified to the government or health authority is classified as notifiable disease.

- Any suspected or confirmed case of a notifiable disease is required to be reported by clinicians/veterinarians to allow the competent authorities to take necessary actions to monitor and prevent outbreak of disease.
- A disease is declared notifiable based on several important factors such as severity, incidence, communicability, socio-economic costs, and preventability; and the list of notifiable diseases may vary from country to country, within country, between the States and between rural and urban areas.

Rabies: A Notifiable Disease (Annexure 1 - Govt. Order of Rabies Notifiable Disease)

Diseases like rabies are highly infectious and fatal, and affects multiple sectors (domestic animals, wildlife conservation, public health, modern services, and livestock economies); therefore, it is important to make sure that rabies is a notifiable disease.

Notification will aid in rabies surveillance, providing better estimates of rabies burden, and will also facilitate contact tracing so that prompt prophylactic measures can be undertaken to prevent infection in other people exposed to the same source.

It will also aid in prompt identification of the emerging rabies foci in animals and interventions to curtail the spread of disease to other animals and humans.

Mechanism for Human Rabies Notification

A suspected/probable/ confirmed case should be notified via email to National Nodal Officer Rabies along with State and District Nodal Officer in complete standard format to:

- **nrcp.ncdc@gmail.com** – GOI
- **hsfw@nic.in** - Government of Tamil Nadu
- **dphvbdc@nic.in** - Department of Public Health and Preventive Medicine, Chennai.

1. **ANNEXURE:** Compiled Monthly Report of Animal Bite Victims receiving treatment at Anti Rabies Clinic (to be submitted by District Focal Point to State Nodal Officer) District Monthly Report (NRCP- M02). (Annexure 2)
2. **ANNEXURE:** Compiled Monthly Report of Animal Bite Victims receiving treatment at all District Anti Rabies Clinic (to be compiled by State Nodal Officer) State Monthly Report (Annexure 3)
3. **ANNEXURE:** (Line List): Rabies/Hydrophobia Cases Monthly report from ID / any others hospital (NRCP- RC). (Annexure 4)

    - The Prevention of Cruelty to Animals Act, 1960.
    - The Animal Berth Control Rules, 2023

Global Strategic Plan: To end human deaths from dog-mediated rabies by 2030 The Prevention And Control of Infectious and Contagious Diseases in Animals Act, 2009, provide for the prevention, control and eradication of infectious and contagious diseases affecting animals, for prevention of outbreak or spreading of such diseases from one State to another, and to meet the international obligations.

Notification

Minimum Information Requirement for Human Rabies

Name: _____

Age: _____

Sex: _____

Address: _____

Biting Animal (Dog/Cat/Monkey/ any other. specify):

_____

Date of Bite /Scratch: _____

Geographical (Location) of Biting event (s) _____

Date of Bite: _____

Category of Bite(I, II, III) : _____

PEP given Yes/No:

IM/ID : _____

Immunoglobulin given: Yes /No

Case definition: suspect/probable/laboratory confirmed.

Date of Diagnosis: _____

Date of Death (If applicable in some cases notification may proceed mortality)

_____

Entry of Human Rabies Cases in Integrated Health Information Platform (IHIP)

- All suspect case to be reported by hospital/clinic
- All probable case to be reported by hospital/clinic
- All laboratory confirmed cast to be reported by lab

4 Efforts undertaken by the Human Health Sector

Multiple steps have been undertaken in the human sector and other departments to eliminate dog-mediated rabies.

DATA COLLECTION AND ANALYSIS

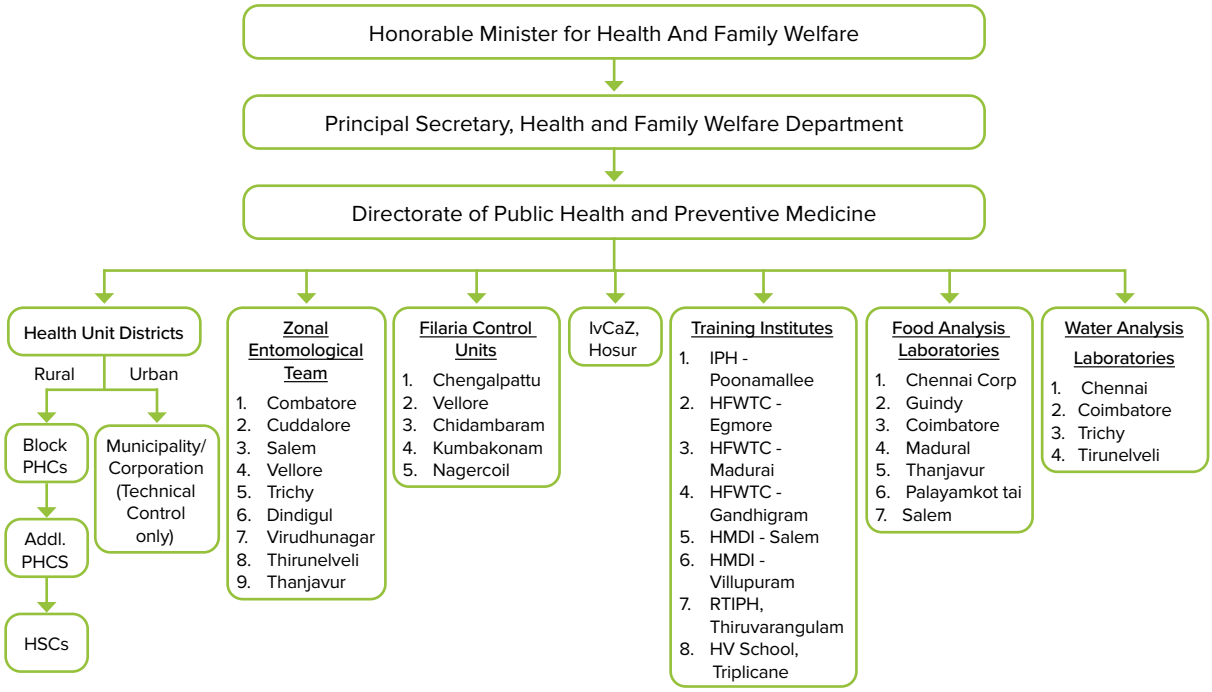
The Human Component:

Data flow and reporting is available at all government institutions which includes:

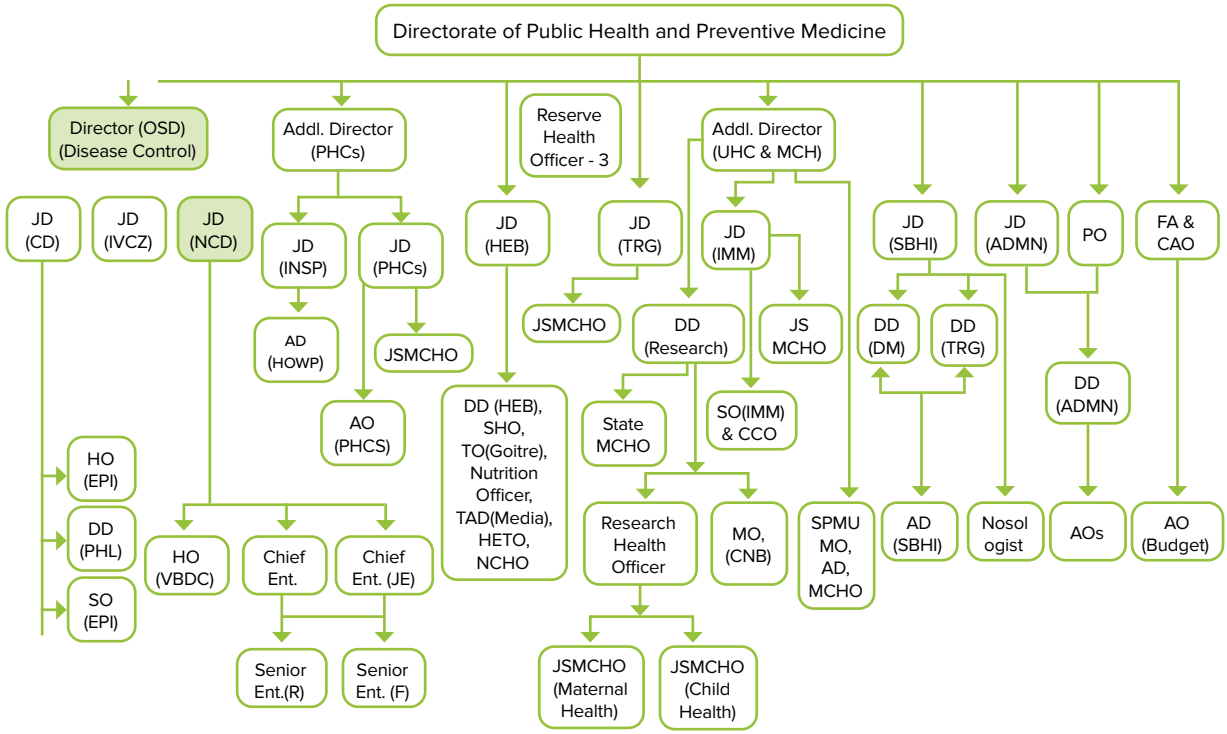
- All taluk and non-taluk government hospitals, medical college hospitals, Community Health Centres (CHCs), and Primary Health Centres (PHCs) of Tamil Nadu every month.
- Dog bite surveillance data.
- Identification of clusters of dog bite cases and daily update on the Integrated Health Information Platform (IHIP) portal in Tamil Nadu.
- Daily fever surveillance is carried out by health Inspectors that help in the reporting of rabies cases including cluster of dog bites cases in and around the Tamil Nadu.
- But data is unavailable from the private sector. Henceforth a missed call or cross referral to be sent from the private nursing homes, dispensaries, clinics, and medical colleges. Cross referral systems can help in the linkage of human and animal rabies surveillance systems.
- A Joint Steering Committee under the chairmanship of the health secretary to be formed at the State and District level; it will conduct meetings every quarter, have an inter sectoral approach and take steps to identify the poor performing areas.
- Field investigations are conducted by healthcare workers and it needs to be strengthened for all suspected human rabies cases. To enhance the process Rapid Response Teams will be formed comprising:
  - State nodal officer, NRCP and veterinary consultant, Health Department, Tamil Nadu
  - Director and Joint Director of Animal Husbandry, Tamil Nadu
  - Veterinary officers – Department of Animal Husbandry
  - Food safety officer
  - Veterinary officer – Department of Forest and Wildlife, Tamil Nadu
  - City and municipality health officers, Tamil Nadu

- To provide 24x7 free helpline for animal bite management and availability of Anti-Rabies Vaccines at all the levels of healthcare like PHCs, CHCs, medical colleges and district hospitals.

Nodal Agency- Directorate of Public Health and Preventive Medicine



Nodal Agency- Directorate of Public Health and Preventive Medicine



Staff pattern involved in surveillance

DPH &PM- Staff Pattern

S.NO	Name of the Post	Total
1	Director	1
2	Additional Director	5
3	Financial Advisor and Chief Accounts Officer	1
4	Personnel Officer	1
5	Joint Director (Public Health)	9
6	Joint Director (Administration)	1
7	Joint Director (SBHI)	1
8	Deputy Director of Health Services	42
9	Deputy Director (Research)	1
10	Principal	5
11	Deputy Director (SBHI)	2
12	Chief Entomologist	3
13	Chief Water Analyst	4
14	Deputy Director (Administration)	1
15	Grade B Officers	6978
16	Para Medical Staff	8763
17	Non Para Medical Staff	27589
18	Ministerial Staff	1973

Rabies Iincidence In Tamil Nadu

Zoonoses are diseases which are naturally transmitted between animals and humans. Zoonoses are categorized into three groups.

a) Endemic zoonosis includes rabies, bovine tuberculosis, Japanese encephalitis, brucellosis, leptospirosis and salmonellosis.

b) Outbreak prone zoonosis in the country include anthrax, rabies, Japanese encephalitis, leishmaniasis, and others.

c) Diseases that have existed previously but are rapidly increasing in incidence or geographical range like Ebola and Marburg.

These diseases can be transmitted directly by contact with an animal (such as rabies), through a contaminated environment (anthrax), food (Campylobacteriosis) or indirectly through bites by arthropod vectors (leishmaniasis). Organisms causing zoonoses include viruses, bacteria, fungi, protozoa and other parasites, with both domestic and wild animals acting as the reservoirs for the pathogens. The diseases they cause in humans range from mild and self-limiting (most cases of toxoplasmosis) to fatal (Ebola hemorrhagic fever).

Over the last three decades, new infectious agents and diseases affecting humans have emerged at a rate of more than one per year, sometimes resulting in high morbidity and mortality in humans and animals, having devastating effects on people, their livelihoods, and the national economies.

Operationalizing 'One Health' can be achieved not by defining the concept, but through collaboration and integration at the cross-cutting merging points of each organization.

When zoonotic diseases occur, traditionally public health and veterinary services respondents as separate entities – no coordinated response occurs between services.

The implementation of this policy could bring about a sea- change and convergence of human, animal and environment health specialists in detection, surveillance and treatment / prevention of diseases.

Tamil Nadu rabies cases status

Years	Cases
2011	42
2012	28
2013	24
2014	30
2015	41
2016	25
2017	16
2018	31
2019	23
2020	20
2021	19

2022	28
2023	22

Tamil Nadu dog bite cases status

Years	Cases
2010	113492
2011	128884
2012	111770
2013	172972
2014	223922
2015	332816
2016	599552
2017	587617
2018	598077
2019	755980
2020	714447
2021	819779
2022	883213
2023	959631

Rabies cases not reported in Health Unit Districts (Last 10 Years)

Sl. No.	Name of the HUDs
1	The Nilgiris
2	Tirunelveli
3	Dharmapuri
4	Palani
5	Thiruppur

6	Cuddalore
7	Ranipet
8	Mayiladuthurai
9	Tiruppur

Priority Zoonotic Diseases

The list of priority zoonotic diseases for the State. Criteria used for prioritization included:

- Transmission potential and incidence
- Socio-economic implication
- Severity of disease or case fatality rate
- Outbreak potential
- Public health emergency of international concern
- Difficulty of disease management
- Bioterrorism potential

List of Priority Zoonotic Diseases:

1. Rabies
2. Leptospirosis
3. Japanese encephalitis
4. Brucellosis
5. Avian influenza and other pandemic influenza viruses
6. Kyasanur Forest Disease
7. Anthrax
8. West Nile virus
9. Bovine tuberculosis
10. Plague
11. Protozoans (Cryptosporidiosis)
12. Salmonellosis
13. Helminths (Campylobacteriosis, Cysticercosis, Hydatidosis, Diphyllobothrium)
14. Fungal diseases (Dermatophilosis, Histoplasmosis, Cryptococcosis, Aspergillosis)
15. Middle Eastern Respiratory Syndrome corona virus

16. Ebola viral disease
17. Other emerging and re-emerging zoonotic diseases

Burden of Zoonotic Diseases

Rabies, Japanese encephalitis, leptospirosis, brucellosis, bovine tuberculosis, anthrax, tetanus, parasitical zoonoses like hydatidosis, visceral larval migrans, cysticercosis and taxoplasmosis are frequently reported diseases in Tamil Nadu. Salmonellosis, Campylobacter and staphylococcus are frequently reported food borne zoonoses in Tamil Nadu.

The Zoonotic Diseases reported in Tamil Nadu – 2018 to 2024

Sl. No.	Name of the Disease	2018	2019	2020	2021	2022	2023	2024 (09.09.2024)
1	Scrub Typhus	1038	2030	1574	2455	4404	5531	3912
2	Rabies	31	23	20	19	28	18	28
3	Japanese Encephalitis	147	231	47	38	28	19	13
4	Leptospirosis	693	849	376	1046	2612	3002	2179

Animal Rabies Surveillance Systems

Animal husbandry:

- Rabies is a 100 per cent fatal and 100 per cent preventable disease
- Half of victims are children below 15 years of age. It affects the world's most vulnerable populations
- Most affected countries are in Asia and Africa
- In India, 95 to 99 per cent human rabies cases are dog mediated
- Rabies causes death in livestock and humans alike affecting livelihood and claiming lives

Dog Population in India

Owned dog population – 9.43 million

STRAY DOG POPULATION

15.31 million (Source: 20th Livestock Census)

1. Zero human deaths from dog-mediated rabies by 2030
2. NCDC, Ministry of Health and Family Welfare and Department of Animal Husbandry and Dairying, Government of India jointly prepared the National Action Plan for Dog-Mediated Rabies Elimination from India by 2030 (NAPRE)
3. NAPRE will guide States to form State Action Plans depending on disease prevalence and resource availability through a step-wise approach

5 Efforts undertaken by the Veterinary Sector

Animal Surveillance (Animal component)

Animal Rabies Surveillance Systems:

Animal husbandry:

Integration and Strengthening of Reporting Systems

- To collect information on confirmed human rabies cases / suspected human rabies cases / dog bite cases / animal to animal bite cases.
- Since rabies is a notifiable disease in Tamil Nadu, Standard Operating Procedures (SOPs) will be developed for exchange of information and data sharing among the health, animal husbandry, municipality and forest departments.
- Reporting by private veterinary practitioners regarding dog bites and other animal bite cases will be made mandatory. Private practitioners will report every month to the Integrated Disease Surveillance Programme (IDSP) on a prescribed format.
- Livestock helpline services to be extended for reporting animal bites.
- Though rabies is a notifiable disease, it is mandatory to report the animal bite case (dog to dog, dog to livestock, dog to other animals) in all government veterinary dispensary /veterinary college in Tamil Nadu.
- Any dog bite instance, cases suspected of rabies and death of animal species such as cattle, dog, cat, goat, and sheep with a history of rabies like symptoms should be shared with the rabies counterparts for follow-up, such as ring vaccination, PEP.
- The nodal officer should disseminate the reports to all stakeholders every month so that action can be initiated at the earliest.

Sero Monitoring/ Serosurveillance Plan

Blood sample collection from Stray Dog

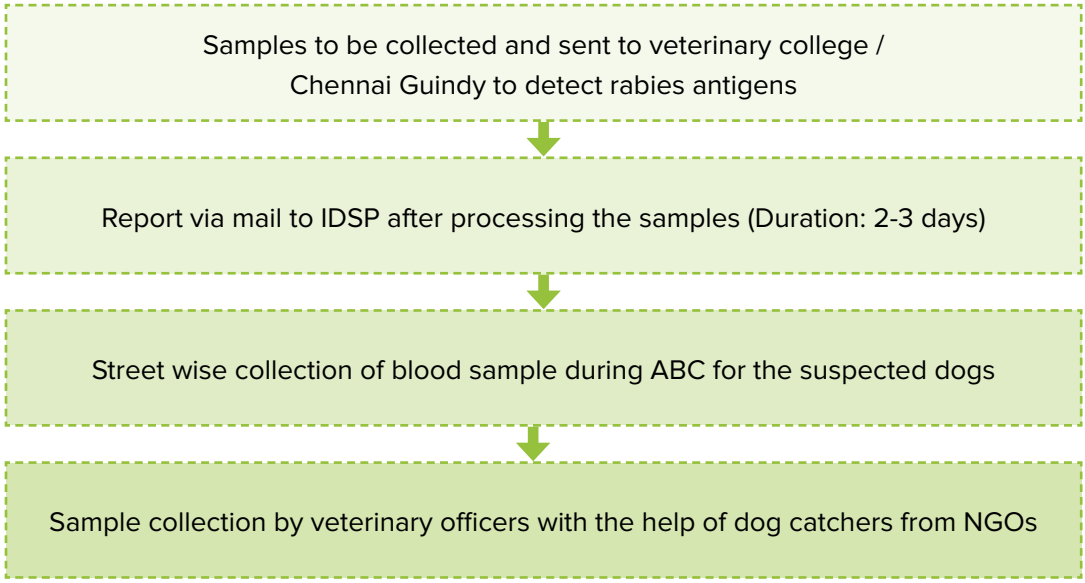
Components of the Surveillance Systems

The surveillance system for domestic / wildlife animal rabies has the following component:

The surveillance programme for the animal includes :

1. Laboratory Surveillance

2. `Serological Surveillance as per the standard guidelines by Department of Animal Husbandry and Dairying (DAHD).



Surveillance of Rabies in Animals

Clinical Surveillance - All animals (livestock, pet, stray and wild animals) having clinical signs of rabies or sudden deaths due to unknown causes but not confirmed by the lab.

Laboratory surveillance - Lab-based surveillance will be performed when the suspected/confirmed animal is dead and post mortem is done.

Laboratory confirmation is required to confirm whether the animal had rabies or not. This is important when the dog is known to have causedbites in a particular area.

Virological Surveillance - The brain tissue samples from carcasses (especially dogs and cats) shall be collected and subjected to a rapid antigen detection test and PCR / FAT to find a rabies case. Samples tested positive to PCR/ FAT will be archived for molecular analysis and research purposes to identify the circulating virus in the region.

- For providing integrated leadership towards 'One Health' approach to rabies elimination by 2030, existing State/ District-Level Zoonotic Committee will be extended for rabies control with additional members from the municipality and wildlife departments ie, Joint Steering Committee at State and District level.
- Task force committee for rabies shall be formed for decision making to achieve rabies elimination by 2030.
- There are 2,741 Veterinary dispensaries, 139 Municipalities, 21 Corporations and 10 Veterinary college Hospital involved in handling animal rabies cases. These shall be designated as surveillance sites for animal bite cases. These sites shall be strengthened for reporting systems.

No. of facilities in the State under NRCP –Tamil Nadu

S.NO	Level	Number of hospitals with rabies PEP facilities	Number of Anti Rabies Clinics
1	I	59	59
2	II	284	284
3	III	2127	2127
Total		**2470**	**2470**

6 Efforts undertaken by the Municipal Corporations

Efforts Undertaken by the Municipal Corporations

In the urban areas, municipal corporations undertake stray dog management according to the 'Animal Birth Control (Dogs) Rules'. The Municipal Council dog-squad picks up unsterilized dogs (males and females), which are then neutered/ sterilized, vaccinated with the Anti-Rabies Vaccine, and returned to their locality after two-four days. The right ear of the dog is clipped to indicate that it is sterilized.

Efforts by Non-Government Organizations and Private sector

- Several NGOs and animal welfare organizations are undertaking dog population management and vaccination programs and thus playing an important role in the fight against rabies. Veterinarians across the State in urban areas conduct awareness shows, and vaccinations programmes in coordination with NGOs. Tamil Nadu to enhance the dog population management such as ABC-ARV under the National Rabies Control Programme to eliminate the rabies in the State.

The Field teams involved in the day-to-day rabies control activities are as follows-

- Medical Health officers
- Veterinary officers
- Nurses/ANMs/ASHAs
- Wildlife officers
- Municipality Veterinary officer and Health Officer

Incentive Programs for Dog Sterilization

To boost dog sterilization rates, the government may consider providing incentives for veterinary surgeons, para-vets, animal handlers, catchers and caretakers. These incentives aim to motivate individuals involved in the capture and sterilization process. The incentive structure may be fixed in line with the Chief Minister's Comprehensive Health Insurance Scheme. Since performing female dog sterilization is a specialized and time-consuming task which requires significant technical skills and expertise varied incentive structure for female/ male sterilization may be formulated.

The same incentives can also be extended to Non-Governmental Organizations (NGOs) and other animal welfare organizations actively engaged in sterilization efforts.

Registration and Regulation

Implementing a registration system for community dogs as they do not belong to anyone in particular is a complex process that requires collaboration among local authorities, animal welfare organizations, and the community. It is essential to balance the humane treatment of the dogs along with public safety considerations and population control efforts.

Through well-defined regulations and a structured registration process, authorities can not only keep track of the community dog population but also ensure their welfare and the safety of the public. Registration allows for the documentation of essential details such as the dog's health status, vaccinations, and neutering, making it easier to plan and implement targeted healthcare and control measures. These initiatives can contribute to the overall well-being of both community dogs and the communities they inhabit.

The process of identification of dogs will be an effective method to register and regulate community dogs within a given community.

Registration of all Pet Dogs

The registration of all pet dogs is imperative to promote responsible pet ownership and address the issue of dog abandonment. Registration provides a comprehensive database of pet dogs, aiding in tracking and accountability. It serves as a vital tool in ensuring that no dog is left abandoned or neglected, as owners can be identified and held responsible for the welfare of their pets.

Registration also facilitates proper care for dogs by promoting awareness among owners about their responsibilities. It encourages compliance with vaccination schedules, health check-ups, and adherence to legal requirements. In the event of a lost dog, registration enables swift reunification with its owner, minimizing the chances of the dog becoming an unattended and free-roaming pet.

By implementing and enforcing dog registration, authorities can create a more organized and compassionate environment that contributes to the overall safety, health, and harmony within communities.

Dog Breeding as a Business

Dog breeding is an emerging business which warrants regulations. The community dog management is a comprehensive process which require regulating the commercial activity of dog breeding. It is considered important since the State does not have data on the commercial breeding practices within its limits. Any spill over/abandoning of the dog by the dog breeder for commercial activities may lead to further increase in unowned dog population.

Hence, the Animal Husbandry Department needs to create a framework for regulating the commercial activities of dog breeding.

The frame work should cover:

- Registration and renewal
- Monthly status on dog breeding
- Microchipping
- Rabies vaccine
- Details of buyer
- Penalties
- Regulation and cancellation

Directorate of Animal Husbandry may maintain the database of all the registrations along with the local bodies.

Designating Dog-Free Zones

Designating schools and its adjoining areas as Dog- Free Zones is a critical step in ensuring the safety, well-being, and comfort of children. Community dogs pose potential risks, including allergic reactions, fear and anxiety among individuals, and the transmission of zoonotic diseases.

Dogs, even those considered friendly, can pose unpredictable risks in crowded and dynamic school environments with the potential for accidental bites or confrontation between dogs and children.

By implementing and enforcing Dog-Free Zones, the policy prioritizes safety and health of children. It will also maintain the cleanliness of spaces such as schools and prevent accidents, and promote a peaceful and conductive environment for learning and recreation.

It requires collaboration and dialogue between schools, local bodies, vendors, and dog feeders in order to establish consensus Dog-Free Zones in the boundaries adjacent to school campuses. There may be clear communication on designating these areas as Dog-Free Zones, along with specific boundaries, rules, and consequences in case of violations. Clear, visible and easily understandable signage should be erected.

A Community Dog Welfare Committee (CDWC) should be designated with the responsibility of implementation and monitoring. The committee will collaborate with local vendors, local bodies and authorities to ensure that the waste is regularly removed and not kept at accessible locations that can attract community dogs.

While 70:30 neutering is practised across the State, the dogs in the Dog Free Zone will undergo 100 per cent neutering, slowly ensuring the reduction in dog breeding and maintenance of Dog-Free Zones.

Designated Dog Feeding Areas

Creating designated community dog feeding areas involve providing a safe and controlled environment for feeding community dogs, minimizing conflicts with the community, and maintaining hygiene. The local authorities and animal welfare organizations have to identify appropriate locations community dog feeding areas. Consider spaces that will minimize disturbances and conflicts.

The Animal Welfare Board of India (AWBI) Notification dated February 26, 2015, about the feeding of stray dogs enumerated how community dogs had to be fed by their caretakers: (i) The caregivers of stray dogs, should follow hygienic techniques when feeding strays in public and ensure they are not fed in the vicinity of children's playgrounds, and (ii) feeding should be away from heavily residential areas.

As prescribed in Section 20 of the Animal Birth Control Rules, 2023, the local body (where the Resident Welfare Association or the Apartment Owners Association has not taken the initiative) shall ensure

i. To designate feeding spots which are mutually agreed upon, keeping in mind the dog population and their respective territories, and the feeding spots shall be far from children play areas, entry and exit points, staircase or in an area which is likely to be least frequented by children and senior citizens.

ii. To designate feeding time depending on the movement of children, senior citizens, at spots which are is likely to be least frequented by children and senior citizen.

iii. Designated feeder shall ensure that there is no littering at the feeding location or violation of guidelines framed by the Resident Welfare Association or Apartment Owner Association or that area. (of the local body).

iv. Designated feeders are allowed to volunteer for the vaccination, catching and release of dogs to assist with the Animal Birth Control Program.

A suggested list of guidelines for responsible feeding apart from the Animal Birth Control Rules, 2023.

The local body should ensure the dogs are fed with care and respect within the specified feeding zones. Any violations in feeding practices and zones should be strictly dealt with as per the condition laid down by the local body in discussion with the local volunteers.

Rehabilitation of Aggressive Dogs and Re-homing

The rehabilitation of aged and aggressive dogs can be a challenging but important endeavour, focussed on improving their quality of life and reducing the risk they pose to people and other animals.

Adoption Promotion

Facilitate the transition of dogs from foster care to permanent homes through a well-structured adoption process. Promote dogs in foster care for adoption through local events, websites, and social media. Screen potential adopters to ensure responsible and loving permanent homes for dogs. Conduct educational campaigns within the community to encourage responsible pet ownership and the benefits of fostering and adopting community dogs. It helps reduce the burden on overcrowded shelters and promotes a culture of compassion and responsibility towards animals.

Palliative Care and Old Age Centres for Dogs

Establishing palliative care, homing, and old age centres for community dogs is a compassionate and responsible approach to ensuring the well-being of ageing or terminally ill dogs. These facilities can provide a safe and comfortable environment for dogs in their later years or those with health issues, offering them a dignified and loving retirement.

Palliative care centres are designed to offer specialized care and support to dogs with terminal illness or those experiencing significant pain or suffering in their final stages of life. It involves pain management, providing comfortable living conditions, and addressing specific medical needs. It may also include emotional support, such as companionship and affection. The centres should have access to veterinary services to monitor and manage the dog's health and to make end-of-life decisions, such as humane euthanasia, if necessary as per Sec 15 of ABC Rules.

7 Prevention and Control of Rabies

Prevention and Control

Vision and Mission of the SAPRE

VISION

To achieve zero human deaths due to dog-mediated Rabies by 2030.

MISSION

To progressively reduce and ultimately eliminate human Rabies, mass dog vaccination and appropriate post-exposure treatment.

Key Principles of SAPRE

The State Action Plan for Rabies Elimination (dog mediated) in Tamil Nadu is based on the three key principles as per the NAPRE guidebook:

- **Prevention:** Introduce cost-effective public health intervention techniques to improve accessibility, affordability, and availability of Post-Exposure Prophylaxis (PEP) to all people in need.
- **Promotion:** Improve understanding of rabies through advocacy, awareness, education, and operational research.
- **Partnership:** Provide coordinated support for the anti-rabies drive with the involvement of community, urban and rural, government, private sectors, and NGOs.

The Components of SAPRE:

The State Action Plan Rabies Elimination (SAPRE) has two components to achieve the elimination of dog-mediated human rabies:

- **Human health component:** To prevent human deaths due to rabies by ensuring timely access for PEP for all animal bite victims and creating an adept responsive Public Health System.
- **Animal health component:** To achieve at least 70 to 80 per cent Anti Rabies Vaccination (ARV) coverage among stray dogs/pet dogs in and around Tamil Nadu.

Strategies of SAPRE

The strategies of both human and animal health components are:

Strategies of Human health component of SAPRE:

The key strategic actions to achieve the objective of the human health component are:

Human Vaccines:

Sustained availability and easy accessibility of ARV and Anti Rabies Serum (ARS) to all animal bite victims at the State/ District Hospitals, CHCs, PHCs, ESI.

Implementation of Intradermal (ID) route ARV in dog bite cases in all PHCs and CHCs, and sensitization of all health professionals, both government and private sectors, to routinely practice ID route instead of Intramuscular (IM) route for rabies prophylaxis.

Strengthening infrastructure for treating the victims of animal bites by establishing Model Anti Rabies Clinics.

- Ensuring availability of trained manpower for appropriate animal bite management/ID inoculation/ ARS infiltration.
- ARV and ARS are procured and supplied by the government pharmacy to all institutions.
- Availability of WHO pre-qualified vaccines and Rabies Immunoglobulin (RIG) to high-risk and exposed individuals
- RIG (ERIG and HRIG) is available only in district hospitals and recommendations to be in place for supply of ARS in all health facilities.
- Develop SOPs for sharing of information between sectors, as agreed upon, at the State level.
- Draft a SOP for outbreak response which is to be shared with the animal husbandry department and municipality.
- Prepare SOPs for an active response to outbreaks.
- Uniform SOP to be followed. To engage rapid response teams during an outbreak.
- Cold chain will be maintained (in refrigerator) and distributed from the central government pharmacy to all the districts and then distributed to all the health facilities (PHCs, CHCs).

Capacity building of professionals in appropriate animal bite management

- Training of health professionals and paramedical on rabies pre and post-exposure prophylaxis according to the national guidelines.
- Training of State, District and below district-level healthcare professionals on program management aspects.

- Joint training of health and veterinary professionals on the operational aspect of the rabies elimination plan.
- Training and capacity building of laboratory professionals on rabies diagnostics.
- Training on surveillance of animal bites and rabies case investigations, and notification.

Strengthening Surveillance of Animal Bites and Rabies Cases in Human

Ensuring implementation of the rabies notification in human health sectors through the web portal for notification of animal bite victims/rabies cases.

- Strengthening periodic reporting system about animal bites and rabies incidence through IDSP and IHIP.
- Resource mapping: Mapping the facilities (State/ District wise) for management of animal bite victims, treatment facilities for suspected rabies cases or infectious diseases hospitals, and mapping of laboratories for rabies diagnostics.
- Establishing sentinel surveillance system for animal bite cases through Model Anti Rabies Clinics.

Strategies for Animal Health Components:

- A monitoring unit at district level to strengthen monitoring and supervision of procurement, availability, surveillance, and quality of ARVs as per OIE standards/ agencies licensed at the national level will be done by animal husbandry department and municipality which will help in surveillance.
- Sero surveillance samples collected by field veterinarians to be sent to higher labs periodically to ensure efficacy and quality of vaccine. Samples will be sent to Chennai diagnostic labs for rabies antigen detection.
- The State Animal Welfare Board, departments for animal husbandry and animal welfare and municipality will monitor the progress towards elimination of rabies.
- Identification and quarantine of rabies suspected dogs in kennel/ shelters; an isolation wards for rabies suspected animals for which funding will be obtained from AWBI.
- Training of dog catchers will be done with funds from municipality.
- Engagement of manpower for vaccination, dog catching and ABC programme.
- Mass Dog Vaccination (MDV) shall be carried out in all the districts in campaign mode. Five camps to be arranged under each commune for a month towards MDV and almost 70 per cent vaccination to be achieved in a month.
- The funding will be sought from Assistance to States for Control of Animal Disease (ASCAD) / AWBI to cover more than 70 per cent of dog population. Also PEP to all dog bite cases (including livestock) will be covered. The funds may be sought from Ministry of Animal Husbandry towards primary dose, booster dose, vaccination accessories (syringe and needle, icepack, capacity building, vaccine carrier, gloves, cotton swabs, disinfectants, clean rubber sheet, dog mouth cap)
- For ARV campaign, the Mobile Veterinary Unit funded by the GOI will be utilized.

8 One Health Approach for Rabies Elimination

ONE HEALTH

Rabies is a zoonotic disease and its prevention and control largely depends on multi-sectoral collaboration with the health, veterinary and wildlife sectors, local administrative department, and municipality including communities. The collaborative, multi-sectoral, and trans disciplinary approach is called the 'One Health' approach for rabies elimination. It mandates work at the local, regional, national, and global levels to achieve optimal health outcomes by recognizing the interconnection between people, animals, plants, and their shared environment.

The concerted effort from the animal husbandry sector, human health sector, local governing bodies, communities, forest and wildlife, and other stakeholders should have a unified approach. This paves way to detect, respond to, and prevent outbreaks of zoonoses and food safety problems, epidemiological data and laboratory information which may be shared across sectors.

Government officials, researchers, and workers across sectors at the local, national, regional, and global levels should implement joint responses to health threats. The target of rabies elimination can only be achieved by sustained and synergistic political commitment.

THE CHALLENGES FOR REALIZING 'ONE HEALTH' IN THE CONTEXT OF RABIES:

- Coordination between departments
- Large stray dog population
- Fragmented activities of animal health components such as dog population management and dog vaccination across sectors
- Lack of structured mechanism of data sharing across human and veterinary sectors
- Lack of awareness among professionals as well as general communities about the legal framework
- Launch of communication campaign by obtaining consent of all the concerned departments
- The State Action Plan for Dog-Mediated Rabies Elimination is based on the 'One Health' Vision and spells out the role and responsibilities of all the stakeholders at all levels to address the challenges

List of Stake holders

1. Department of Health
2. Department of Animal Husbandry
3. Department of Wildlife/ Forest
4. Department of Municipality
5. Department of Panchayati Raj
6. Department of Education

Human Component

Health care delivery to the community is carried out by the three-tier system in the State. The primary level of care is given by the Directorate of Public Health and Preventive Medicine. Through the primary health centers and health sub centers, the main activity of the department is prevention of diseases and promotion of healthcare, maternal, child and adolescent healthcare and performing basic curative functions. In Tamil Nadu, as on September 2015, 1750 primary health centers, 280 urban primary health centers and 8706 health sub centers are established in the State.

The specialty health care is provided by the Directorate of Medical and Rural Health Services with the establishment of taluks and non-taluk hospitals and district headquarters hospitals. The activities carried out are specialty healthcare services and referral services. A total of 261 secondary health care institutions are functioning in the State.

The medical education and the super specialty healthcare are provided by the Directorate of Medical Education. With the establishment of 21 medical colleges in the State, medical graduates and specialists are graduated to support the healthcare of the State. With the established hospitals in these medical colleges, a large number of referral cases are handled and super specialty care provided.

Animal Husbandry

Animal husbandry contributes significantly in supplementing the income of small, marginal farmers and landless labourers, and also in generating gainful employment opportunities, especially self-employment to a substantial number of rural and urban population, many of whom are women who pay a major role in the care and management of livestock. It serves as a vital source for providing nutritious protein rich balanced food in the form of milk, egg, meat and other value-added products. Moreover, animal husbandry is also intricately associated with the social, cultural and traditional values of the region.

The department of animal husbandry plays a major role in providing veterinary healthcare and improving the genetic production potentialities of livestock and

poultry reared in the State. Various beneficiary-oriented schemes are also being implemented for the economic upliftment and welfare of the poor, downtrodden and weaker sections of the society. Dairy sector is important not only for the production of highly nutritious food products, but also for the sustenance of poor farmers and the overall prosperity of the farming community. It is a matter of great pride that a nation which was deficit in milk has now become the leading milk producer in the world. Tamil Nadu ranks eighth in milk production and is well on its way towards achieving the second white revolution as envisioned by the Hon'ble Chief Minister of Tamil Nadu. The State exports poultry meat, eggs, poultry and milk products, meat. There is also the intercontinental transport of animals and germplasm through and into the State.

Animal Welfare Board

The Tamil Nadu Animal Welfare Board (TNAWB) is actively involved in various initiatives to support and protect animals. Here are some of their key activities:

1. **Funding and Support:** The TNAWB provides financial support to animal welfare organizations.
2. **Animal Birth Control (ABC) Programs:** They implement ABC programs to control the stray animal population humanely.
3. **Rescue and Rehabilitation:** The board supports the rescue, treatment, and rehabilitation of stray and abandoned animals.
4. **Awareness and Education:** They conduct awareness programs about animal rights and humane treatment of animals.
5. **Shelter and Care:** They ensure that rescued animals are provided with proper shelter, medical care, and a safe environment.

These efforts are part of a larger objective to streamline both governmental and non-governmental efforts in animal welfare across Tamil Nadu

Wildlife

The land mass of the State has rich sources of wildlife. Tamil Nadu is endowed with rich forest areas of the Western Ghats, Eastern Ghats and coastal plains. The Western Ghats ranges are home to many endemic species and is among the 25 global biodiversity hotspots. A number of other micro centers of endemism are located in Tamil Nadu. The State has the highest number of flowering plants in the country, its forests are rich in medicinal plants and wild relatives of cultivated plants which are important from the conservation point of view. All the 14 endemic mammals of the Western Ghats and all the five primates of peninsular India are found in Tamil Nadu. It also has a considerable population of national heritage animals such as elephant and tiger and their numbers show a growing trend.

Environmental Interface between humans, animals, and wildlife

There are areas where human-livestock-wildlife contact exists, sometimes leading to man- animal conflicts. The existing feral population serves as a platform for disease transmission. It is worth mentioning that a lot of wildlife live outside protected areas, since most of these areas are not fully fenced, and hence wildlife moves in and out of these areas in search of pasture and water during certain periods within the year. When they move out of the protected areas, they interact with people and their livestock on private and community land causing human wildlife-livestock interaction that provides a platform for diseases transmission. In relation to health, the responsibility lies with the State government.

A healthy environment is essential for the survival and growth of all living things. Sustainable development of any State rests on the protection of the environment. Conservation of environment has become a challenge due to the pressure on natural resources. As life – sustaining systems come under growing pressure from human activity, it is absolutely essential to initiate action for reducing the causes of global warming, pollution, fresh water scarcity, and loss of biodiversity. The future of humankind is inevitably linked to that of plants, animals and ecosystems.

Hence, conservation and enhancement of life support systems like land, water, forests and biodiversity are important for ecological balance. To combat environment-related issues, several initiatives have been taken by the government for pollution abatement in rivers and lakes, besides promoting environmental consciousness among school children and the public at large. Forests provide environment stability, ecological, food security and water security to the country, and also provide livelihood security to the forest fringe people. Medicinal plants from forests provide health security to the millions of people depending upon traditional systems of medicine. Forests play an important role in bio-geo-chemical cycles particularly carbon cycle and hydrological cycle. Carbon sequestration potential of forest is very important for mitigation of climate change, and hence has a direct bearing on the very survival of humanity.

Wildlife – livestock human interface

The role and significance of wildlife-livestock interface in disease ecology has largely been neglected, despite recent interest in animals as origins of emerging diseases in humans. There is a need to objectively assess the relative interest by the scientific community in infectious diseases at interfaces between wildlife and livestock, to characterize animal species and regions involved, as well as to identify trends over time.

Prominent wildlife-livestock interface resulted largely from interaction between phylogenetically closely related and/or sympatric species. The bird poultry

interface was the most frequently cited wildlife-livestock interface worldwide with other interfaces reflecting regional circumstances.

Diseases are becoming an important issue in conflicts between national parks authorities and local communities. Local communities increasingly perceive wildlife negatively, especially when they have no stakes in the management or use of the wildlife resource. Under these circumstances, disease outbreaks can be the trigger to conflict, and politics dictate that interventions by public health and (agriculturally oriented) State veterinary services take priority which usually negatively impacts the wildlife resource. At the same time, local communities and livestock are seen as a threat to many protected areas as they compete with wildlife for resources, and the history of disease introduction.

To reduce the conflict, the risks and impacts of disease, in particular, at the interface between wildlife and livestock, but also at the interface with people, will need to be better understood by all stakeholders. Hence, 'One Health' mainly focusses on

- Pets to Vaccinate/ sterilize dogs and cats
- Physicians to vaccinate and treat human victims- post bite
- Wildlife experts to advise on oral vaccination in wildlife
- Social activists to convince responsible authorities on the importance of vaccination/ ABC in dogs
- In addition to National Health Mission and ASCAD, funds may be requested from the State budget, local body funds, projects and NGOs.

WAY FORWARD

- Surveillance have to be scaled-up – mass awareness on rabies
- Pet dog registration (responsible ownership) – Ensuring annual vaccination
- Explore newer methods of catching dogs - Involvement of feeders and caretakers
- Oral rabies vaccine
- ABC-ARV can be carried out simultaneously at the same transportation and logistics cost
- Stronger 'One Health' collaboration

RESPONSIBILITY OF ANIMAL HUSBANDRY DEPARTMENT

- Identifying the rabid animal/dog
- Isolation and removal of rabid animal/dog
- Identifying any other sick animal/dog in the localised area
- Mass canine vaccination in identified area

- Dedicated human resource
- Regular mass canine rabies vaccination
- Regular humane dog population management
- Vigorous community education
- Frame/ enforce rabies control laws
- Strengthening and establishment of checkposts/quarantine centres
- Creation of dedicated Animal Welfare Para- Police/Animal Law Enforcement Agency
- District –wise RRT to be constituted

Responsibility of Wildlife Department

- Identifying the rabid animal/dog in the forest / broader area
- Isolation and removal of rabid animal
- Identifying any other sick animal/in the localised area
- Mass canine vaccination in identified area
- Restriction of cross border dog movement mandated

Role of Health Department

- Dedicated Anti-Rabies/Animal Bite Clinic in all the health centers with all the required logistics/staff
- Proper data entry (name, address, parentage, mobile no., detail of village head, nearest police station, type of exposure, type of animals)
- Dedicated staff (nurse, computer operator-should follow-up with the bite victim regarding PEP)-
- Effective communication protocols between animal and public health system. Rapid exchange of information regarding animal bite cases to AHD/relevant authority
- Health department to make both active and passive immunization adequately available
- Legislation to be framed to declare rabies as a notifiable disease under the existing Prevention and Control of Infectious and Contagious Disease Act, 2009, or Entry 6 and Entry 15 of List II, the State List of the Seventh Schedule of the Constitution of India
- Mechanism for early warning protocol to be developed
- Regular awareness program especially for panchayat, citizens and other relevant stakeholders including the in-charge of PHC and veterinary centers, ASHA workers. Myths about Tetanus Toxoid injection to be dispelled
- Maintenance of individual health record to be made mandatory

- Effective communication protocols between animal and public health system
- Rapid exchange of information to AHD or any concerned authority
- Notify suspected/probable/confirmed cases immediately from local to intermediate to central levels
- Robust tracing of in-contact person (s) and PEP/Pre Exposure Prophylaxis (PrEP) to be given; surveillance to be both active and passive
- Epidemiological investigation of outbreaks; investigation of all foci, identifying sources of infection
- Reporting mechanism through IDSP and IHIP portal through the field staff in the district
- Steering committee will be formed both in the State as well as in the district, and the same to be communicated to the district for elimination of rabies
- NGOs identified by the AWBI will be assigned for ABC programmes, and the procurement of vaccine for the animals in the animal husbandry department will be done under the ASCAD scheme of GoI.
- All medical and para-medical staff have been reoriented with adequate training on administration of vaccination in both animal as well as human sectors.

9 Laboratory Diagnosis of Rabies

Establish a system to regularly assess staff capacity to accurately diagnose suspect rabies samples (both human and animal)

- As of now the facility is available only at the Tamil Nadu Veterinary and Animal Science University (TANUVAS), Chennai, which has a NABL accredited diagnostic referral lab
- Additional centers may be proposed at SPHL Chennai, Madurai Medical College and Coimbatore Medical College
- The budget towards establishing centers and courier charges will be proposed in upcoming Programme Implementation Plan. Training will be planned on capacity building for sampling and transportation to the field staff
- OIE Lab for Rabies at Bangalore will be contacted for further information if required.
- Develop a strategy plan for maintenance of existing surveillance activities, including ongoing laboratory investigation, for all suspected cases in dogs in the States
- SOPs will be prepared by the AHD and TANUVAS, which will be implemented and shared across the State For training, ASCAD funds will be utilized
- Develop an established procedure for ongoing laboratory investigations of all suspected cases in domestic and terrestrial wild animal (carnivore) species in the State (Even though you are rabies free based on successful mass vaccination campaigns)
- At present, the animal husbandary and wildlife departments are given refresher training to improve surveillance in the fringe areas

List of Animal Sampling Labs

Sampling Analysis Lab

TANUVAS has established a unique biosafety level- 3 (BSL 3) laboratory with small animal experimentation facility through the funding from Tamil Nadu Innovation Initiatives (TANII), Government of Tamil Nadu. The facility, called the TANUVAS-Bio Containment Animal Disease Laboratory, is the 'first-of-its-kind' in a State-run veterinary university in India.

Certification of TANUVAS – BCADL

The TANUVAS-BCADL facility is a certified BSL-3 laboratory in India and has been awarded with the “Certification of BSL 3 lab” by the Review committee on Genetic Modification, Department of Biotechnology, Government of India, New Delhi, in December 2021.

- To undertake diagnostic services for identified BSL-3 viral and bacterial pathogens, subject to required regulatory approvals
- To undertake research on identified BSL-3 viral and bacterial pathogens including animal trials subject to required regulatory approvals
- To undertake regulatory quality assurance services for vaccine/ drug manufacturers
- Capacity building in the area of biosafety applications for students, researchers and stakeholders

10 Dog Population Management

The involvement of officials in waste management has been planned in regular stakeholder meetings at both the State and District level.

- The Solid Waste Management (SWM) Rules, 2016 is being implemented in the State by local bodies
- Urban Local Body specific action plans are already in place
- People participation is critical in implementing the SWM rules Dog Population Management (DPM) strategy for implementation in the State
- Enumeration of dog population to be done As per 2019 census, total population of stray dog in the State of Tamil Nadu was 9.3 lakhs
- Target needs to be fixed to reduce the dog population as per norms
- Based on the target, the ABC/ARV centers need to be established in the districts
- Funds to be mobilized. GOI may facilitate AWBI funds towards the activity Established a system for training or refresher courses on responsible dog management for professionals in animal health at local level.
- Training will be imparted by TANUVAS to all stakeholders at all levels. Funds will be sourced through ASCAD/ NRCP.
- Assessment of the DPM strategy based on current dog ecology or KAP surveys done at a local level
- Established procedure for training veterinary and animal technicians across the State: KAP surveys will be done by TANUVAS and AHD at all levels in rural villages, town panchayat, municipality and corporation. Both the medical and para-medical health and veterinary department officials have been reoriented time to time. Process for conducting responsible dog ownership campaigns for dog population management in the state.
- A comprehensive plan will be developed by the AHD and implemented through local bodies to create periodical awareness campaign for pet dog owners once in three months in the respective areas.

Mobile Surgical Units for Animal Birth Control and Vaccination

The establishment of mobile operation facilities is essential to ensure that even distant places in local bodies have access to periodic ABC programs along with vaccination campaigns. The mobile units are designed to provide doorstep

treatment, address concerns and promote public awareness about the importance of rabies prevention and zoonotic diseases.

- Mobile operation facilities ensure that even remote areas can benefit from ABC and vaccination programs. It helps bridge the gap in healthcare access for animals
- By providing treatment at the doorstep, the mobile units help alleviate public objections to sterilizing dogs mobilizing dogs or transporting them from their familiar surroundings which can be a source of concern for the public
- The mobile facilities prevent the displacement of dogs, allowing them to remain in their familiar territory
- Besides providing medical services, the units also play a vital role in creating public awareness about the significance of rabies prevention and other zoonotic diseases

The establishment of mobile surgical units is a practical and effective way to expand the reach of ABC and vaccination programs. It fosters public awareness and acceptance for the initiatives.

11 Information Education Communication (IEC)

Health Department

- Display of banners, posters, and other IEC materials on dog bite management to create awareness among the public
- Awareness programme for school students and training programme for medical students
- Creating awareness among the public through audio visual aids and social media
- Block Development Officer to be approached for help to form small-scale rabies control programme

Animal Husbandry

- Available rabies awareness material with NAPRE shall be utilized for public awareness
- Efforts will be made to include knowledge on rabies in school and college curriculum
- Awareness on rabies can be generated among school teachers by veterinary colleges.
- Use of media, particularly social media, TV, radio, newspapers for creating awareness
- Liaising with officials involved in waste management though the Swachh Bharat Mission
- Involvement of NGOs and local bodies in generating awareness

Cross cutting issues Health Department

- Establish an inter sectoral rabies task force, committee, or working group, bringing together all relevant stakeholders at the local or State level, and define their meeting intervals.
- Establishing joint steering committee and district-level committee for rabies elimination
- Drafting SOP for rabies reporting and outbreak response
- Mobilizing funds from different agencies (central and State level)
- Training at different levels for rabies elimination
- Professional education - Procedure to determine the training needs of professionals at the local level

- Directorate of Public Health and Preventive Medicine (DPH&PM) has six RTIs in the State. Training will be planned for all category of staff towards newer guidelines
  - Vaccine Technique
  - Field Investigation
  - Sampling Transportation
- Advocacy- Activities to develop a small-scale rabies control program using the national advocacy plan
- Steps to use the national advocacy plan to obtain support from stakeholders to financially resource the national rabies control strategy.
- District level plan will be put in place by following the national advocacy plan and discussed in the steering committees
- A steering committee will be in place where all the potential successes will be shared and discussed, and in turn, will be communicated to the echelons at the national level by which potential funders will be tapped.

12 Involvement of Stakeholders

Creating a multi-stakeholder committee

Ideally, it will be the duty of the responsible government authority to bring together stakeholders for consultation. However, if they are unwilling or unable to do this, NGOs can create a working group themselves and share the findings to the relevant authorities.

The following is a list of possible stakeholders to be consulted. Those marked with a * are recommended as the minimum requirements of the committee.

Government – Usually local, but the central government will also be relevant for policy and statutes, and will be the key stakeholder if the programme is national. Several departments are likely to be relevant, including agriculture/veterinary, health, environment (refuse collection), tourism, education, and sanitation. (The government must be represented on the committee).

Veterinary community – National governing body, veterinary professional association, private practitioner clusters and veterinary colleges.

NGO community – local, national, and international organizations working in animal welfare, animal rights and human health.

Animal sheltering, fostering and rehoming community – both government/municipality-run and private/NGO-run organizations.

Educators – In schools and universities.

Local media – For education, publicity, and local support.

International bodies with relevant responsibilities – World Health Organization (WHO), World Organization for Animal Health (OIE), and worldwide veterinary associations.

Local community leaders/representatives

Local community – Both dog owners and non-owners.

Scope of the ABC-ARV monitoring committee

The committee shall meet periodically in the department every quarter to review the status of birth control and anti-rabies vaccination administered to stray dogs and to discuss the latest technological development in vaccination. It will function to issue instruction for catching, transportation, sheltering, sterilization, vaccination, treatment, and release of sterilized and vaccinated dogs.

a. To create public awareness, solicit co- operation and funding

b. To provide guidelines to pet dog owners and commercial breeders from time to time

c. To get a survey done of the number of street dogs by an independent agency

d. To take steps for monitoring dog-bite cases to ascertain reasons of dog bite, the area where it took place, and whether it was from a stray or a pet dog

e. To keep a watch on the national and international developments in the field of research pertaining to street dog control and management, development of vaccines and cost-effective method of sterilization and vaccination.

ABC-ARV MONITORING COMMITTEE MEMBERS

- Directorate of Public Health and Preventive Medicine, Tamil Nadu (National Rabies Control Program)
- Senior Project officer from UNDP
- Directorate of Animal Husbandry and Animal Welfare, Tamil Nadu
- Tamil Nadu Veterinary and Animal Scienced University (TANUVAS), Tamil Nadu
- All Municipalities–Tamil Nadu
- Forest and Wildlife Department, Tamil Nadu
- NGOs

ROLE OF URBAN AND RURAL LOCAL GOVERNING BODIES (LGB)- (MUNICIPAL CORPORATION)

As per the Panchayat -Raj and Municipality Act, the local self-government, councils, and corporations oversee the implementation of the ABC programs. The Acts are to be implemented according to the guidelines for stray dog vaccinations, and dog population management.

The activities envisaged for LGB are:

- Advocacy, training, and capacity building of Panchayati Raj Institution (PRI) members on prevention and control of rabies in their ward.
- Members can immediately report to Animal Husbandry, Health Department when an unusual incidence of dog bite or a potential rabies case in their respective ward is noted.
- Members can ensure that human bite victim (exposed) gets proper (full dose) medical treatment.
- Provide a list of patients exposed to animal bites and maintain the list also in the respective ward, while follow up measures are strictly adhered to.
- Monitor and strictly implement mass vaccination campaigns of dogs in their respective ward/villages.

- Encourage pet dog registration in their wards/constituencies.
- Monitor pet owners and encourage them to register and vaccinate their pets.
- Monitor mass dog vaccination and DPM plans undertaken by the concerned agency.
- Co-ordination with health and veterinary sectors for strategic mass vaccination of stray dogs.
- Monitor solid waste management and garbage disposal areas in their wards, and identify problem areas of waste collection points and ensure proper waste management to prevent conglomeration of stray dogs in such areas.
- Information sharing on animal bites and rabies cases to the local animal husbandry department, health department and local authority.
- To provide required logistics for undertaking DPM and mass stray dog vaccinations such as dog pounds (ABC centre with operation theatre/ mobile clinic and dog kennels), dog vans and logistic support to run the program as per the ABC (Dogs) Rules, 2001.
- Monitoring of slaughterhouses and meat stalls with existing laws (Food Safety and Standards Authority of India, Licensing, and Registration, 2011) and regular monitoring of waste generated from these units.
- To collect waste from vegetable, fruit, flower, meat, poultry, and fish market on a day-to-day basis and promote setting up of decentralized compost plant or bio- methanation plant at suitable locations in the markets or near markets ensuring hygienic conditions to accumulation of waste which would attract dogs (free- roaming dogs and community owned dogs).
- Special focus on preventing the disposal of animal carcasses in and around peripheral areas of villages, towns, cities, and around forests to avoid easy availability of food for free roaming dogs and scavenging wild animals and further prevent interactions between wildlife and domestic animals.

Role of Directorate of Education

Children are most vulnerable to dog bites. It is therefore important to include Rabies in the formal education system at all levels in the Govt. of Tamil Nadu

- Prevention of Rabies and animal bite management to be incorporated in the school health program.
- Inclusion of the basic prevention and control measure for Rabies in the school curriculum to sensitize children and youth about the disease and measure to be undertaken in case of animal bites.
- Capacity building of teachers on first aid measures in the event of animal bites.
- To ensure that dogs in and around school premises are vaccinated.
- Ensure proper waste management in school compounds to prevent access to garbage to free- roaming of owned dogs.

Role of Swachh Bharat Mission (SBM)

- Steps should be taken to exclude dogs from access to the sources of food (rubbish dumps and abattoirs), and installing animal-proof rubbish containers.
- Swachh City Plans under SBM could consider including steps to install animal proof rubbish containers.
- Monitor SWM in their wards and identify problem areas in waste collection points and ensure proper waste management to prevent conglomeration of stray dogs in such areas.
- Community awareness and IECs on maintaining a clean neighborhood.
- Strict monitoring of waste generated from slaughterhouses and meat stalls with existing laws, the Food Safety and Standards Authority of India (Licensing and Registration) 2011.

Role of Private Partners, Non-Government Sectors, Professional medical and Veterinary Organizations.

The elimination of dog-mediated rabies envisages active participation of the private and NGO sector.
The key roles identified are:

- Develop a strong volunteer network for community engagement and mobilization
- Promotion of ARV campaigns
- Promote responsible pet ownership
- Intensify rabies awareness education and interpersonal communication campaign
- Surveillance/reporting of suspected animal and human rabies cases
- Ensure animal bite management in humans and animals

Responsibility of Animal Husbandry Department / Wildlife Department

- Identifying the rabid animal/dog
- Quarantine of the rabid animal/dog
- Identifying any other sick animal/dog in the urban and rural area
- Mass canine vaccination in identified area
- Dedicated human resource
- Regular mass canine rabies vaccination
- Regular humane DPM
- Vigorous community education
- Frame/ enforce rabies control laws

- Strengthening and establishment of check post/quarantine centers
- RRT and State and District Zoonotic Committee to be constituted

Role of Health Department

- Established Anti-Rabies Clinic in all the PHCs, CHCs and ESI Hospitals with all the required logistics / intra dermal trained staff.
- Proper dog bite data entry (name, address, mobile no., detail of village, type of exposure, type of animals)
- Inter sectoral coordination between both health and veterinary for sharing the information regarding animal bites cases/ cluster of dog bites to municipality and animal husbandry department for further action.
- The health department to make adequate availability of both ARV and ARS in all district hospitals and ARV in all PHCs,CHCs, ESI Hospitals.
- Early warning protocol to be developed.
- Activities for awareness creation to be performed during the World Rabies Day.

13 Surveillance of Rabies

Surveillance is the process of systematic collection, collation, and analysis of data with prompt dissemination to those who need to know for relevant action to be taken. A well-functioning disease surveillance system provides information for planning, implementation, monitoring and evaluation of public health intervention programmes.

Surveillance is a key element in SAPRE so that problems can be identified, and actions can be undertaken in a timely manner. A dedicated surveillance system each for human and animal health components (veterinary and wildlife) with linkages at the appropriate level and systematic data sharing on the defined parameter is a prerequisite before targeting a geographical area for control and progressive elimination of rabies.

Components of the Surveillance Systems

The surveillance system for human rabies and domestic/wildlife animal rabies has the following component:

1. Priority Events / Data Parameters
2. Disease Notification
3. Data Nodes/ Data Generation points
4. Responsible officers
5. Recording and Reporting Mechanism
6. Monitoring and Evaluation
7. Support functions
8. Data Sharing & Intersectoral coordination
9. Infrastructure and logistics
10. Information Education and Communication

Surveillance of Human Health Component on SAPRE

The surveillance programme includes clinical/physical, laboratory and serological surveillance as per the standard guidelines by MoHFW. Recording and reporting of every case of animal bite victim and rabies cases occurring in the community is an essential step for maintaining the surveillance.

Responsibility of district-level health officer as the nodal officer reporting human rabies cases to the State

Deputy Director of Health Services (DDHS) from the district is the nodal officer for reporting of rabies cases. The official has to investigate the cases along with the animal husbandry and the local body department in the investigation form circulated by from the State.

In suspected cases

- Collecting sample, ante- mortem (saliva, skin, CSF, serum) and post-mortem (brain tissue), if needed
- Conducting verbal autopsy to collect the case history for the patient

In probable cases

- Identifying contacts of patients and the animal involved for follow up.
- Transporting the samples to the State laboratory. Invigilating to identify the source of infection
- Activating the Rapid Response Team.

Infrastructure and Training

List of hospitals providing 24 x 7 animal bite management and ARV facility.

- All PHCs
- All government hospitals
- All medical college hospitals
- ESI

Reporting and Entry of Human Rabies cases

All suspected, probable and laboratory confirmed of human rabies cases to be reported to State nodal officer and on the IHIP portal by all government and private hospitals.

Surveillance of Animal Health Component on SAPRE

The surveillance programme for animals includes laboratory and serological surveillance as per the standard guidelines by the DAHD. Recording and reporting formats for surveillance of animal rabies needs to be available at all animal health facilities at the block, district and State levels.

General guidelines for Pet Owners

To be a responsible pet owner one should protect the pets and keep vaccinations up to date. Pets should not be allowed to roam.

- Do not leave food of any kind outside the home and use garbage can with lids to avoid attracting stray animals.
- It is against the law to own wild animals as pets. If you see a wild animal acting strangely, report it to the local administrative bodies. Do not go near it.
- Bats and other wild animals should be kept out of dwellings by closing any small opening they can use to enter.
- If the pet is bitten or has had physical contact with a potentially rabid wild animal, wear gloves to examine or wash your pet. Contact your local veterinarian for further advice

Events Based Surveillance System and Public Health action to be taken for animal health sector

In the event of observed abnormal behavior in a stray animal (dogs running amok or causing unprovoked bites), steps to be taken in the veterinary sector.

Actions to be taken

- Complete epidemiological investigation of the event and active case search in and around areas
- Follow up of the animal that had bitten the livestock/pet animal – status alive or dead
- Notify the authorities in standard format- block/ district with unique case ID / State/National-level
- Conduct risk assessment and ensure PEP of those in contact with the suspected animal
- In case of death, send the biological sample to the lab
- Issue advisory/ IEC about dead body disposal and use of milk or meat in case of livestock animal

Death of a pet following animal bite / unexplained death without / History of exposure or Death of a livestock following animal bite/unexplained death without History of exposure

Action to be taken

- Complete an epidemiological investigation of the event and enquire about the status of vaccination
- Follow up of the animal that had bitten the livestock/pet animal – status alive or dead)
- Send sample to the lab the Triple Layer Packaging (saliva/brain tissue, if dead)
- Issue advisory/IEC about use of dead body disposal and use of milk or meat in case of livestock animal

- Notify the respective authorities
- Conduct risk assessment and ensure PEP of those in contact with the dead animals

Unexplained Death of wild animal (captive and free roaming)

The event can be observed by the general public/ forest dwellers/ workers/ woodcutters/ wildlife officer/ forest officers/ veterinary officials/ healthcare workers.

Action to be taken

Immediately inform the concerned wildlife officer/ Panchayats

- Complete epidemiological investigation of the event through RRT
- Send sample to the lab in the TLP (saliva/brain tissue, if dead)
- Issue advisory/ IEC about dead body disposal and use of milk or meat in case of livestock animal
- Notify the respective authorities
- Conduct risk assessment and ensure PEP of those in contact with the dead animals

Death of any stray Animal-dogs

The event can be observed by the general public / veterinary official/ municipal workers/ healthcare workers

Action to be taken

- Immediately informthe municipality veterinarian/ PRI Panchayati Raj Institution (PRI) and animals should be immediately removed from the community to prevent further risk of exposure. It should be confined and appropriate action to be taken as per local laws.
- The appropriate biological sample shall be taken after the death of the animal (samples from the central nervous system for laboratory diagnosis, if available).
- Active search of cases and exposed animals in and around the area
- Conduct risk assessment and ensure full rabies PEP for those who are exposed. Events-based surveillance system and public health action to be taken for human health sector. In the case ofevents observed in the human health sector, following action needs to be taken:

Death of human following an animal bite

Neuro-encephalitic cases with history of animal bite or death of a person following animal bite reporting to a health facility (infectious diseases hospital/ tertiary care hospital/ suspected death in community.

Actions to be taken

- Complete epidemiological investigation (search cases in and around areas, bitten by the same animal)
- Follow-up of the suspected source (animal – status alive or dead)
- Collect the appropriate biological sample (brain tissue) and transport it to the lab in the triple-layered packing
- Notify about human death to the authorities
- Conduct risk assessment and ensure PEP for contacts of suspected/confirmed human rabies case
- Sharing of data with animal husbandry department/ municipal authorities

Cases on Animal bites in human

Actions to be taken

- Arrangement for timely provision of complete PEP
- Counselling of the animal bite victim
- Follow-up for completion of PEP
- All cases of animal bites to be analyzed on a weekly basis in terms of time, place and person to identify clustering, and in terms of the quality parameters defined
- Periodic data sharing with respective animal husbandry/ veterinary departments and the local government (Municipalities/PRIs).

Scheme for Birth Control and Immunization of Stray Dogs – AWBI

Role of Animal Welfare Board

The scheme is meant for controlling the population of stray dogs by sterilization and reducing incidence of rabies by immunization. Rastriya Krishi Vikas Yojana (RKVY): Under the scheme financial assistance is provided for per dog for pre and post- operative care, including medicines and ARV; for catching and relocation of the dog, to provide primary healthcare facilities and free vaccination.

At present, Department of Veterinary Preventive Medicine, MVC, TANUVAS is involved in the surveillance of animal rabies only for research purposes, that too in certain pockets. Surveillance can be expanded across the State.

A separate e-based surveillance portal can be established with the budget provision by GOI.

Surveillance

Linkage of human and animal rabies surveillance systems:

The epidemiological data will be shared among the stakeholders in real-time and to animal owners to create awareness on the existing status of rabies in the State.

Standard Operating Procedures (SOPs):

SOPs will be formulated during the stakeholders meeting and circulated to all health facilities in the State to follow the uniform guidelines in notification, investigation and control measures.

Field investigations for all suspected human rabies cases:

- Case Investigation Format (CIF) is in place and communicated to all health facilities for reporting
- The local health authority, the DHO of respective district, is responsible to share the CIF immediately to DPH&PM

Prevention and Control (Vaccines and Outbreak Response) Human and Dog Vaccines

Availability and accessibility of human rabies vaccines in the State.

- Drug inventories is managed by Tamil Nadu Medical Services Corporation Limited (TNMSC)
- ARV is included in Essential Drug List (EDL) which mandates availability of the vaccine in all government health facilities, including PHCs
- Private: GOI may formulate guideline
- Availability of quality dog vaccines in accordance with OIE standards
- OIE-standard vaccines are being procured and utilized

Standard Case Definition to be used for Surveillance System:

STANDARD CASE DEFINITIONS FOR HUMAN RABIES

Rabies surveillance under the NRCP and the IDSP is of three types

- Suspect case has to be reported by a health care worker in S Form
- Probable case has to be reported by medical officer in P form
- Lab confirmed case has to be reported by all laboratories having confirmatory test facilities for rabies in L form

Standard Operating Procedure for Dog Population Estimation

The population estimate of Free Roaming Dogs (FRD) in the intended area for mass canine vaccinations and ABCis essential

- To estimate the magnitude of resources required for interventions such as MDV. For instance, the number of vaccines required, dyes, identification marks, bikes, human resource.

- To evaluate the efficacy of interventions and course correction for subsequent MDV campaigns.

Methods for Dog Population Estimation

In the Indian context, the approach for estimating the canine population should be resource and time- efficient while simultaneously providing the most accurate estimate for meeting the target (at least 70 per cent of dog population). Methods suggested for estimating the FRD population for vaccination:

- **Mark-Release-Recapture Methods –** As the name suggests, a sample of dogs is captured, marked in a manner that does not affect the animal survival, and released back into the population. Allow the marked dogs to mix randomly through the total population and then the dogs are captured a second time. The number of recaptured dogs (marked dogs) to first-time captures in the second sample gives the Lincoln-Petersen estimate of total population size. The method can be planned in two ways:
  - **Single-Sight (SS) Surveys –** A survey is done involving two surveyors in each team, travelling on a two- wheeler through all parts of an allocated zone and recording details of every dog they see. Both people keep a lookout for dogs, one is responsible for driving, and the other records details of the dogs sighted in the mobile phone app.
  - **Sight-Re sight (SRS) Surveys –** After conducting the SS survey, SRS is done to check the accuracy of SS. It is done by conducting a survey again in the same region (one or 2 two days continuously), and then marking all dogs with a physical marker (such as dyes), or virtually (pictures of the dog through mobile app). All dogs seen on the second day are recorded irrespective of whether or not they were 'marked' as seen on the first day. A minimum of two surveys should be conducted and the details matched to ascertain the number of dogs seen once and those seen twice during the entire survey.
- **Using statistical software –** The population estimate with 95 per cent confidence intervals can be obtained by using the application Super Duplicates tool https://chao.shinyapps.io/SuperDuplicates/20. As per the review of literature currently available on dog enumeration, probabilistic models developed on capture-recapture technique is the most feasible method adapted for the Indian context which has provided the most accurate population estimation to actual dog population.
- **Using the local animal census database –** The canine census has been included in the 2012 livestock census. If enumeration of the dog population is not possible, the block-level census could be used for planning. However, this is not a recommended method as it could lead to under vaccination and shortage of resource material in the selected area.
- **Conducting local house-to-house questionnaire –** Surveys- to estimate the number of owned dogs. The mean number of owned dogs per household, and dog: human ratios. Since the total human population or number of households

is generally known through national population censuses, an estimate of the owned dog population can then be extrapolated.

Planning of Dog enumeration in An Identified area

Before you begin

- Identify the number of villages/wards/administrative units where the MDV is being planned
- Map the boundaries, the internal streets/roads of the village/wards/administrative units
- Draw detailed street map of the selected block to ensure that every street is covered
- Make a list of owned and un-owned dogs in the local community which would be called community owned dogs. All dogs that confirm to the definition of FRD must be included in the survey.

Identify and train the survey team

- A minimum of two surveys should be conducted and the details should be matched to ascertain the number of dogs seen once and those seen twice during the entire survey.
- SOP mass dog rabies vaccination campaign

Planning of Mass Dog Rabies Vaccination Campaign

A meeting with stakeholders (animal husbandry, health, municipality, NGOs, rabies committee) must be set up:

- The vaccination teams should be divided into groups and briefed on the schedule for the day, location, and the selected route.
- The team should be equipped with enough ARV while maintaining a cold chain to undertake MDV.
- Registration and permanent identification of all vaccinated dogs should be done with the issuance of a card for pet animals and owners.
- In the case of free roaming/stray dog vaccination, dog handlers could be used to catch and restrain dogs humanely as per the ABC rule and be vaccinated.
- The use of a color spray for all vaccinated dogs as temporary marking could be done for the stray/community owned dogs.
- A survey should be undertaken soon after the completion of the MDV (within three days) of the campaign to assess the number of marked and unmarked dogs.

Training of vaccinators, vaccine handlers, and dog catchers

- Only trained volunteers should be involved in MDV. The volunteer should be trained on proper vaccination techniques and humane dog catching. Vaccine handlers must be trained on the proper handling, storage of vaccines, disposal of used materials, and vaccine utilization reporting.
- All volunteers involved in MDV campaigns should complete the vaccination against rabies through pre-exposure prophylaxis as they are considered high-risk personnel.

Selection of Vaccination strategy

Four basic methods for conducting mass dog vaccination programme:

House-to-house visits – Field mobile teams visit individual houses and vaccinate the pet animals.

Hospital/ clinic visits – Dog owners take their dogs/cats at any time to private or government veterinary clinics.

Vaccination camps – Temporary vaccination posts can be set up at a central location within villages or cities which are convenient and commonly used by the community members.

Capture/vaccinate/release campaigns – In case the programme is merged with the sterilization programme.

- **Mobile street vaccination plans –** For pet dogs, community dogs and FRDs where vehicles would be used for gauging the areas and setting the base for vaccination.
- Combined approach of different methods, for instance, house-to-house vaccination can be combined with vaccination camp and mobile street vaccination plan.

Facilities required for Mass dog vaccination and post-vaccination survey

1. **Human resource**
   - State program management unit
   - Support staff for logistics
   - Project manager
   - Trained AI technicians
   - Veterinarians
   - Post-vaccination survey staff
   - Dog catchers
   - Laboratory staff
2. **Vaccine**

   ARVs in the cold chain-maintained environment

- Communication devices
- Cool box with an ice pack
- Dog catching equipment–nets, pole, etc.
- Disinfectant - ethanol 70
- Vaccine and vaccine carriers
- Camera for digital records
- Marker pen (permanent)
- GPS device
- Cotton/tissue paper
- Dog registration card
- Sample label
- Needle and syringe (18 gauze, 10 ml)
- Relevant registers and forms
- Hand gloves
- Dyes/identification tools

3. **Diagnostics -** ELISA kits for antibody titration, laboratory testing- courier charges/fees

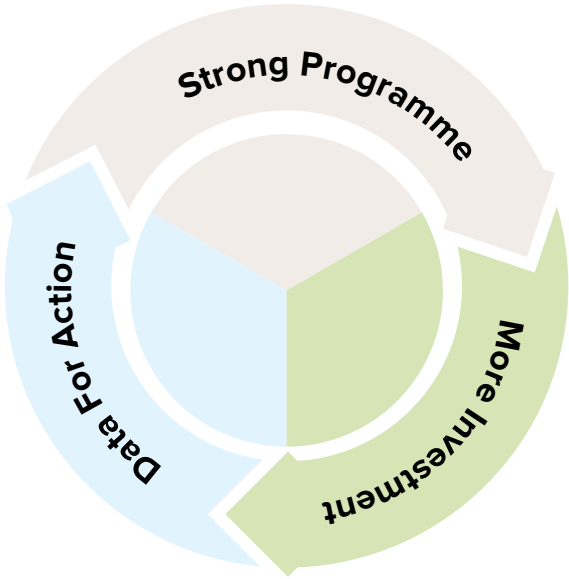
4. **Vehicle**
   - Staff transport and goods
   - Post vaccination survey motorcycle
   - Vehicle for field team
   - Rent/fuel allowance

ARV and Immunoglobulins Status 2020-21 and 2022-23

Sl.No	Year	Procurement of ARV	Procurement of ASV	Remarks
1	2020-21	1060700	285664	
2	2020-21	1065300	332668	
3	2022-23	442920	146000	
Total		**2568920**	**764332**	

ARV and Immunoglobulins Status 01.04.2022 to 31.7.2023

Sl.No	ARV and Immunoglobulins	ARV (No. of vials)	Anti-Rabies Serum (No. of vials)
1	Annual Requirement	11,63,340	1,16,292
2	Annual Procurement	12,79,700	1,33,200



- Develop State action plan
- Upscale dog vaccination
- Develop State preparedness plans, capacity building, and human vaccine stockpiling
- Promote Integrated Bite Case Management (IBCM)
- Develop State elimination project funded through regional mechanisms

Community-level 'One Health' surveillance in Tamil Nadu

Development of **Rapid Response Toolkit for Rabies** to clarify the 'One Health' surveillance pathway from the peripheral up to the State level by integrating all line departments.

Integration of rabies education in State school curriculum

- Lessons content and poster/flipbooks developed
- Started with primary and secondary schools in pilot districts
- Outcomes on children's awareness evaluated
- Scaling up statewide

14 Proposed Financial Plan

Funds proposed for SAPRE

STATE NAME: TAMIL NADU

State Action Plan for Dog-mediated rabies Elimination by Tamil Nadu 2030

Operation Plan

TENTATIVE BUDGET PLANNED FOR State of Tamil Nadu

Phase 1

Mass vaccination campaign and establishment of infrastructure in the first year, and to develop human resource, dog catching training in the State and at district level under NGOs. Total dog population in Tamil Nadu - 1296655.

Tentative Budget Planned for the State of Tamil Nadu

Proposed Activities	Details	Cost	Tentative budget in ₹ per Year	Total Cost in (Rs) - For 6 years	Comments if any
Phase I. Mass Vaccination Campaign and Infrastructure Development (Enumerated dog population -1296655)					
1. Surveillance					
Human Resources	**Engaging dog catchers for both catching and mobilization**	Rs. 200/ Team/Dog/ Per year for 13 lakh enumerated dogs	**260000000**	**1560000000**	Average working day = 240, 6200 dogs to be caught and mobilised in a day by 230 teams (three dog catchers per team)

Tentative Budget Planned for the State of Tamil Nadu

Proposed Activities	Details	Cost	Tentative budget in ₹ per Year	Total Cost in (Rs) - For 6 years	Comments if any
Human Resources	**Engaging one veterinary assistant surgeon per two blocks and zones**	Rs.40000/ month for 230 veterinary assistant surgeons for overall management, or hiring cost Rs.500 for government veterinary surgeons (40%) and Rs.1000 for hiring persons (60%) for vaccination 20-25 dogs per day	**98880000**	**593280000**	
Training	**Training once in two years**	Rs.25000/ block in rural and zone in urban areas	**11525000**	**34575000**	Block -388, Zone - 73 including GCC
Logistics	**ARV (tissue culture) procurement**	Rs. 40 / dog/year for 13 lakh enumerated dogs	**52000000**	**312000000**	
Mobilisation support	**Travel allowance to veterinary surgeon**	Rs.500 Per day as maximum as per TN/TA Rules	**27600000**	**165600000**	
	Hiring of vehicles for the team and logistics to the camp site	Rs.2000 per camp for 230 teams for 240 days	**216000000**	**1296000000**	
2. Prevention and Control					

Tentative Budget Planned for the State of Tamil Nadu

Proposed Activities	Details	Cost	Tentative budget in ₹ per Year	Total Cost in (Rs) - For 6 years	Comments if any
Logistics	**Procurement of ARV and ARS for Post EP**	Cost as per the TNMSC rate	**180000000**	**1080000000**	NRCP Funds
	Procurement of ARV for Pre EP	Rs. 80 per person PreEP of risk groups i.e. 230 teams (1000* 2doses +10%= 2200 doses	**176000**	**1056000**	
Infrastructure	**Procurement of cold chain equipment for storage and mobilization**	Rs. 150000 per ice lined refrigerator per block in rural and zone in urban areas for 411 health facilities	**61650000**	61650000	
		Rs. 3500 per vaccine carrier and two per block in rural and zone in urban areas for 411 health facilities	**2877000**	2877000	
Phase II. ARV/ABC					
Dog Population Management	**Animal Birth Control -ARV Programme**	Rs. 1650 per dog for 1296655 enumerated dogs	**2139480750**	**2139480750**	
	IEC	Rs.25000/ block in rural and zone in urban areas	**11525000**	**69150000**	Banner, radio jungles and awareness campaign
	Total		**3061713750**	**7315668750**	

Requirements and Costing

A. Human Resource

1. **Veterinary Doctor**

ABC Consultant

Or

VAS in service

Or

Outsourcing ABC Consultant = 230 Numbers one per constituencies.

2. **Dog Catchers**

Total dog catchers = 230 X 2

2 per constituencies

B. Transport

Travelling Allowance = Rs. 500/- per day for VAS and

Rs. 2000/- per camp conducted.

Costing Explanation:

ABC consultant B.V.S.C. qualification, 230 person will be temporarily appointed and paid Rs. 40,000/- per month or VAS in state animal Husbandry department numbering 230 will be engaged and paid Rs. 500/- or outsourcing ABC consultant and paid Rs. 1000/- for vaccinating 20-25 dogs per day .

For transport vehicles may be hired and paid Rs. 2000/- per camp for 230 teams for 240 days. The VAS will receive Rs. 500/- per day has TA, DA.

Notes: 1) Vaccine cost: If animal husbandry department provides the vaccines from the department budget, Rs.10, 00000 shall be reduced from the project cost.

2) If one four-wheeler is diverted for the project by the animal husbandry department from central funding for ambulance vehicle, Rs.600000 shall be further reduced from the project funding.

If vaccine and one four-wheeler are available as per notes1 and 2, the project cost shall be only Rs.36,73,000, which may be allotted out of NCDC budget or by MP funding or any other government support.

This project may be redesigned to carry out both sterilization and vaccination. For the redesigned project to carry out ABC and vaccination, the project cost shall be about Rs. 213.10 cores (Rs.1650/dogx1296655 dogs). In such a case, all the municipalities, corporations, town panchayats and blocks can fund the above cost out of their ABC funding.

15 Implementation of State Monitoring Committee

a. Secretary in-charge of the urban development department or equivalent in the State or Union Territory shall be the Chairperson of the State Monitoring and Implementation Committee.

b. Director, Health and Family Welfare Department

c. Director, Department of Panchayati Raj

d. Director, urban development department (or equivalent)

e. Two representatives of the Animal Welfare Board of India

f. Two representatives of State Animal Welfare Board

g. Representative of the Indian Veterinary Association of the State Chapter

h. President, State Veterinary Council of the concerned State

i. Administrative heads of at least two municipal corporations, and representatives of at least two panchayats, and at least two municipal councils in that State or Union territory

j. Officer in-Charge of the State Animal Welfare Board shall be the member secretary as well as the nodal officer for implementing the program in each State and Union Territory

k. A representative equivalent or above the post of Associate Professor appointed by the Vice Chancellor, Tamil Nadu Veterinary and Animal Sciences University (TANUVAS)

Note: No representative of the Board should be directly involved in the Animal Birth Control Programme as Implementing Agency.

Functions of the State Monitoring and Implementation Committee:

The State Monitoring and Implementation Committee shall be responsible to carry out the following functions:

i. The setting up of Animal Birth Control Monitoring Committees at the local authority levels as required by the Animal Birth Control Rules.

ii. Developing a comprehensive district-wise plan (including but not infrastructure, budget, etc. for DPM in urban and rural areas throughout the State,)

iii. Enlisting \animal birth control implementing agencies possessing the requisite training and experience, recognised by the Animal Welfare Board of India to carry out the Animal Birth Control Programme (ABCP) as per the district and State Plan. It may include the animal husbandry department of the State working in consultation with and under the technical guidance of the Animal Welfare Board of India.

iv. Ensuring that the requisite infrastructure is set up, and other capital costs (including but not limited to fully furnished ABC facilities/campuses with ambulances and equipment), and all other expenses for successfully running an animal birth control program, including human resource costs, are made available to the animal birth control implementing agencies from the local authorities, and reimbursed in a timely manner as required by Rule 6 of the ABC rules.

v. Responsible for overall monitoring of the ABCP in the State by the local authorities.

vi. The State Monitoring Committee shall also carry out inspection on receipt of any complaints regarding the ABC and cruelty to animals during the Birth Control Program and violation of Animal Birth Control Rules and take appropriate action.

Meeting of the Committee: The committee shall meet once every three months or as and when necessary.

Local-Level Implementation and Monitoring Committee:

The committee shall be constituted with the following members:

a) Municipal Commissioner or Executive Officer of the local authority who shall be the ex-officio Chairman of the Committee.

b) A representative of the public health department of the district.

c) A representative of the animal husbandry department of the nearby block or district.

d) A jurisdictional veterinary doctor

e) A representative of the district Society for Prevention of Cruelty to Animals

Functions of the Local-Level Committee:

The committee shall be responsible for planning and management of dog control programme in accordance with these rules. The committee may:

i. Issue instructions for catching, transportation, sheltering, sterilisation, vaccination, treatment and release of sterilized vaccinated or treated dogs.

ii. Authorize veterinary doctor to decide on a case-to-case basis the need to put to sleep critically ill or fatally injured or rabid dogs in a painless

method by using sodium pentothal. Any other method is strictly prohibited, and such cased are to be decided through a sub-committee comprising of two veterinary officers and a representative of a recognised animal welfare organisation. The sub-committee shall specify reasons in writing for euthanasia of each animal.

iii. Creating public awareness and solicit co-operation and funding.

iv. Providing guidelines to pet dog owners and commercial breeders from time to time.

v. Taking steps for monitoring dog-bite cases and to ascertain the reasons of dog bite, the area where it took place, and whether it was from a free roaming community dog or a pet dog. Details may be collected from a human hospital in a requisite format.

vi. Arrive at an estimate of the number of dogs within its territorial limits by conducting a census in the manner advised by the AWBI.

vii. Ensure development of the infrastructure required to execute the ABCP for the estimated number of dogs. Detailed project reports shall have to be prepared and submitted to the State Monitoring and Implementation Committee in coordination with the State government.

viii. The infrastructure shall be designed in such a manner to carry out area-wise ABC in a phased manner of at least 70 per cent dogs in the targeted area before a new area is taken up. The infrastructure shall include, but not be limited to pre-operation preparation areas, operation theatres, post-op care, kennels, kitchen, store rooms for rations and medicines, parking area, residential rooms for veterinarians and attendants, quarantine wards, ambulances.

Availability of WHO pre-qualified vaccines and RIG to high- risk and exposed individuals:

- ERIG is available in all government institutions including CHCs.
- To ensure availability of HRIG in tertiary care institutions in the State for pediatric (<5)/ ERIG Skin Sensitivity Test positive.

Process to conduct mass dog vaccination campaigns for at least 70 per cent of the total dog population in a year, and for three consecutive years according to the plan described in the national rabies strategy.

- SOPs will be prepared by the AHD and TANUVAS and implemented and shared throughout the State.
- Training will be imparted to the veterinary professionals on MDV to achieve 70 per cent coverage for three consecutive years
- Funds under ASCAD scheme is required for the procurement of animal rabies vaccine for the vaccination of an estimated 17.5 lakh dogs (approximately 20 lakh vaccine required)

Post-vaccination surveys to evaluate vaccination coverage in dogs:

- AHD and TANUVAS which are the nodal agencies for animal vaccination will evaluate the vaccination coverage surveys by developing SOPs and identifying personnel.
- Training will be imparted to all veterinarians and livestock inspectors in the districts of the State.
- Necessary funds should be released by the GOI under NRCP for Monitoring and Evaluation.

Develop SOPs for sharing of information between sectors been agreed upon at the State level.

- To formulate committees as per the draft guidelines at all levels
- SOP - To ensure the information by all line department is shared with the nodal agency - DPH&PM
- Suggestion: Block-level committees to be formed in similar fashion including PRI

Prepare SOPs for an active response to outbreaks:

- Rapid Response Team is constituted at the block-level to respond to any outbreak
- The existing RRT is already following SOP to investigate zoonotic diseases along with veterinary department officials
- The local health authority is vested with the responsibility to coordinate all line department as formulated according to the guidelines.
- Role of RRT: To attend to the area, investigate the death along with coordinating departments like animal husbandry, wildlife, local body, and sending the report to the State as well as Centre.

Prepare SOPs for the observation of rabies suspect dogs:

- SOP already available with TANUVAS for observation and quarantine of rabies suspected cases. TANUVAS has already developed SOP and communicated it to the coordinating departments.
- It will be shared with animal husbandry department and municipal administration too.

To establish the process for the facilities for the observation of rabies suspected dogs:

- At present the facility of Under Observation of Rabies (UOR) for clinically suspected cases is only in MVC. It shall be expanded to the other six constituent colleges under TANUVAS.
- Funds for the same shall be released under NRCPRKVY.
- For home quarantine, necessary advisory measures will be provided by creating SOPs, and followup activities will be ensured through trained personnel.

Establish a system for capacity building to conduct field investigations and planned outbreak responses for human rabies cases in the entire State.

- All the district health officers in the State are qualified public health personnel
- The district epidemiologists are also qualified public health personnel
- The DPH&PM have six RTIs to conduct regular capacity building to block-level officials

Process for transboundary movement to prevent the re- introduction of rabies into designated rabies-free zones:

- Surveillance of fringe areas in coordination with neighboring State authorities.
- According to Sec 12 of Animal Birth Control Rules, 2023, the project in-charge of the local authority of the Animal Welfare Organisation shall maintain the records of the Animal Birth Control.

16 Challenges

- Require more AWBI-recognized animal welfare organizations to scale up – MDV, surveillance and ARV
- Limited infrastructure/facilities to scale-up ABC/ARV programmes
- The process of catch-vaccinate-release requires considerable human resource; recapture percentage reduces.
- More number of teams required for outer and bigger zones to increase the coverage Strengthening of 'One Health'

If Mission Rabies is asked to carry out the project, it shall provide project management, staff training and Mhealth App management and research free of cost.

Two-days Workshop held at Mahabalipuram on August 10-11, 2023 on the Development of State Action Plan for Dog Mediated Rabies Elimination from Tamil Nadu by 2030

The Department of Health and Family Welfare, Tamil Nadu organized two day workshop on the development of State Action Plan for Dog-Mediated Rabies Elimination from Tamil Nadu by 2030 on August 10-11, 2023 at Mahabalipuram, under National Rabies Control Programme, supported by UNDP India and the "Access and Delivery Partnership (ADP)". ADP is a UNDP-led global project supported by the Government of Japan."

The objective of the workshop was to develop state and district action plan for dog mediated rabies elimination from Tamil Nadu by 2030

The workshop was inaugurated by Principal Secretary, Health and Family Welfare, Principal Secretary, Animal Husbandry MD, National Health Mission, Director of Public Health and Preventive Medicine, Tamil Nadu dignitaries from UNDP, New Delhi and consultant from NCDC new Delhi.

Officials who participated in the two-day workshop.

a. Deputy Director, NCDC, New Delhi
b. Director, Public Health and Preventive Medicine, Chennai
c. DPH (OSD) State Programme Officer, Tamil Nadu
d. Directorate of Medical Education (DME).
e. Director of Medical and Rural Health Services (DMS)
f. Secretary, Indian Medical Association (IMA), Tamil Nadu
g. President, Indian Academy of Pediatrics (IAP)
h. Joint Director, Rural Development
i. Joint Director, Town Panchayat.
j. Worldwide Veterinary Service- NGO-Nilgiris
k. Deputy Director of Municipal Administration, Chennai
l. Professor and Head, Zoonoses Research Laboratory (ZRL), CAHS, TANUVAS Administration, Chennai

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Annexure: 1

National Rabies Control Programme

Monthly Report of Animal Bite Victims

Format I

Name of PHC/ Institution		
Reporting Month and Year		
Total no. of Patients attending ARC Clinic (New Cases Only)		
Animals & Species		
1. Dog		
2. Cat		
3. Monkey		
4. Any other Animals & Wild Animals (Cow, Rat, Rabbits, etc)		
Type of Dog		
Stray Dog		
Pet Dog		
Category of Bite		
1. Licks on intact skin		
2. Minor scratches or abrasions without bleeding		
3. Single or Multiple transdermal bites or scratches, licks on broken skin; Contamination of Mucous Membrane with saliva		
Age & Gender		
0-12 Years	Male:	Female:
13- 50 Years	Male:	Female:
60 & above	Male:	Female:
Wound Washing Facility at Anti Rabies Clinic (Yes/No)		
Vaccine Used at Anti Rabies Clinic		

1. Quantity Procured (Vials)		
2. Quantity Utilized (Vials)		
3. Mention shortage if any		
Anti Rabies Serum (Immunoglobin) used at Anti Rabies Clinic		
1. Quantity Procured (Vials)		
2. Quantity Utilized (Vials)		
3. Mention shortage if any		
Vaccination given by		
IM Route (Essential schedule on day 0.3.7.14.28 days)		
ID Route (Updated Thai Red Cross Regimen 2-2-2-0-2)		
Post Exposure Treatment Received after Animal Bites		
1. Complete		
2. Partial		
3. No treatment		

Procurement of ARV and ARS under NRCP (In last three years)

Sl.No	Year	Procurement of ARV	Procurement of ASV	Remarks
1	2020-21	1060700	285664	
2	2021-22	1065300	332668	
3	2022-23	442920	146000	
Total		2568920	764332	

Annexure: 2

National Rabies Control Programme

Monthly Report of Human Hydrophobia cases

Format II

Name of PHC/ Institution	
Reporting Month and Year	
Address	
Number of Human Rabies Deaths confirmed by Laboratory Tests	
Number of Human Rabies Deaths Diagnosed on Clinical ground only	
Animals & Species	
1. Dog	
2. Cat	
3. Monkey	
4. Any other Animals & Wild Animals(Cow , Rat, Rabbits, etc)	
Category of Bite	
1. Licks on intact skin	
2. Minor scratches or abrasions without bleeding	
3. Single or Multiple transdermal bites or scratches, licks on broken skin; Contamination of Mucous Membrane with saliva	
Post Exposure Treatment Received after Animal Bites	
1. Complete	
2. Partial	
3. No treatment	

National Centre for Disease Control
Ministry of Health and Family Welfare
Government of India

Line List of Suspected/ Probable/ Confirmed Rabies Cases/ Deaths*

Date:

Name of the Health Facility/Block/District/State:
Address of the Hospital
Name & Designation of Nodal Person
Contact Number:

Type of Health Facility/Block/District/State:

Email ID:

S.No	Name	Age	Sex	Contact Number	Village	Sub District/ Taluk/Block/Mandal	District	Biting Animal	Suspected / probable/ Confirmed	Address of place wherebite incidence took place	Category of Bite	Status of PEP (Complete/ Partial/ Nil/NA)	Name of the health facility reported Rabies case	Outcome of patient (Death in Hospital/ LAMA/ Alive)	Mobile Number	Date

To be reported by Health facilities to District Nodal Officer, State Nodal Officer & National Program Division (Delhi) atnrcp.ncdc@gmail.comevery month before 5th day)

Annexure: 3

Annexure: 4

Details of RRT Dept of Health Tamil Nadu Under NRCP

Sl.No	Name	Designation	Mob no
1	Dr. T.S. Selvavinayagam	Director, Public Health and Preventive Medicine	9445030714
2	Dr. P. Sampath	Addl. Director, DC, Public Health and Preventive Medicine	9344852289
3	Dr. Senthil	Joint Director (Communicable Disease)	7358150526
4	Sudalaimani	Chief Entomologist (JE)	9445375861

Details of District RRT Under NRCP

Sl.No	Name	Name of the District Health Officer	Phone Number
1	Ariyalur	Dr.K.M. Ajitha	9677472669
2	Aranthangi	Dr.S. Namasivayam	9486625582
3	Athur	Dr.N. Yogananth	8883232777
4	Coimbatore	Dr.P. Aruna	8248411359
5	Chengalpattu	Dr.B. Baranidharan	9841561713
6	Cheyyar	Dr.D.N.Satheeshkumar MBBS., MD (CM)	9176990044
7	Cuddalore	Dr.S. Porkodi	9677666257
8	Dharmapuri	Dr.K.R. Jayanthi	9787240055
9	Dindigul	Dr.M. Varadharajan	9842461869
10	Erode	Dr.S. Somasundaram	9943030055
11	Kancheepuram	Dr.T.R. Senthil	8072803506
12	Kallakurichi	Dr.S. Raja	9940851336
13	Krishnagiri	Dr.G. Ramesh Kumar	9500239485
14	Kovilpatti	Dr. Jegaveerapandian Gunasekaran.D	7373676777
15	Karur	Dr. K. Santhoshkumar	9444481398
16	Madurai	Dr.P.Kumaragurubaran	9486195002
17	Mayiladuthurai	Dr.C. Ajith	8072182368

18	Nagapattinam	Dr.P. Vijayakumar	7299041310
19	Namakkal	Dr.K. Poonkodi	9965558850
20	Nagercoil	Dr.S. Meenachi	9790792383
21	Pudukottai	Dr.S. Ramganesh	9865680120
22	Perambalur	Dr.Pradhapkumar	7358122531
23	Palani	Dr.M. Anitha	9842704358
24	Paramakudi	Dr.P. Indira	9944328531
25	Poonamallee	Dr. J. Prabhakaran	9080227721
26	Ramanathapuram	Dr.K.V. Arjun Kumar	9442217186
27	Ranipet	Dr. T. Senthilkumar	9444212544
28	Sivakasi	Dr.N. Kalusivalingam	9597490349
29	Salem	Dr.S. Soundammal	9962560901
30	Sivagangai	Dr.M. Vijaychandran	9445359955
31	Tenkasi (Sankarankoil)	Dr. V. Govindan	7358122631
32	Tiruvallur	Dr.P. Priya Raj	9500294570
33	Tirupathur	Dr. S. Chitrasena	7358144196
34	Thanjavur	Dr.B. Kalaivani	9788855481
35	Tiruvarur	Dr.V.C. Hemachand Gandhi	7639496586
36	Tirunelveli	Dr.R. Geetharani	8678925767
37	Tiruppur	Dr.P.R. Muralisankar	9489203641
38	Thoothukudi	Dr.S. Porchelvan	9025853869
39	Tiruchirapalli	Dr.A. Subramani	9791146511
40	Theni	Dr.K.R. Jawaharlal	9442534652
41	Tiruvannamalai	Dr.R. Selvakumar	9443552519
42	Udagamandalam	Dr.P. Balusamy	9443715335
43	Villupuram	Dr.S. Senthilkumar	9894989705
44	Vellore	Dr.P.G. Bhanumathi	9444424790
45	Virudhunagar	Dr.V. Yasodhamani	7339493001
46	Chennai	Chennai City Health Officer	

IEC Materials-Rabies Pamphlet

மருத்துவம் மற்றும் மக்கள் நல்வாழ்வுத்துறை

ரேபீஸ் – வெறி நாய்க்கடி நோய்

1. ரேபீஸ் நோய் என்றால் என்ன ?

ரேபீஸ் என்பது ஒரு வகை வைரஸ் கிருமியால் ஏற்படுகின்ற நோய் ஆகும். நாய் கடித்தால் மட்டுமே இந்த நோய் ஏற்படும் என்று பலரும் நினைக்கிறார்கள். இந்த நோய் நாய், பூனை, குரங்கு, ஆடு, மாடு, குதிரை, நரி, கீரி, ஓநாய், மற்றும் பிற வன விலங்குகள் போன்றவை கடித்தாலும் ஏற்படலாம். இந்நோய் 95% வெறிநாய் கடிப்பதன் மூலம் ஏற்படுவதால் அதனை வெறிநாய்க்கடி நோய் என்று அழைக்கப்படுகிறது.

2. ரேபீஸ் நோய் எவ்வாறு ஏற்படுகிறது ?

வெறி நாய் கடித்தாலும் திறந்த உடல் காயங்களில் வெறிநாயின் எச்சில்பட்டாலும் ரேபீஸ் நோய் தொற்ற வாய்ப்புள்ளது.

3. ரேபீஸ் நோயின் அறிகுறிகள் யாவை ?

முதலில் காய்ச்சல் மற்றும் தலைவலி ஏற்படலாம். அதை தொடர்ந்து பதற்றம் மற்றும் தண்ணீரை கண்டாலே பயப்படும் சூழல் ஏற்படலாம்.

4. நாய் / விலங்கு கடித்தவுடன் மேற்கொள்ள வேண்டிய சிகிச்சை முறைகள் யாவை ?

நாய் / விலங்கு கடித்தவுடன் காயத்தை குறைந்தது 15 நிமிடங்களுக்கு சோப்பு தண்ணீரால் நன்றாக கழுவ வேண்டும். குழாயிலிருந்து கொட்டுகின்ற தண்ணீரால் கழுவுவது மிகவும் நல்லது. கிருமி நாசினி (ஆல்கஹாலல், டெட்டால்) உபயோகப்படுத்துவது நல்லது. கடித்த இடத்தில் கட்டு மற்றும் தையல் போடுவதை தவிர்க்கவும்.

5. உயிர் காக்கும் தடுப்பூசி

ரேபீஸ் நோய்க்கு தடுப்பூசிகள் உள்ளன. நான்கு ஊசிகளில் ரேபீஸ் நோயை 100% வராமல் தடுத்துவிடலாம். இந்த ஊசிகள் தொப்புளில் போடப்படுவதில்லை. கையிலேயே போட்டுக் கொள்ளலாம். நாய் கடித்த உடனேயே இச்சிகிச்சையை தொடங்கி விட வேண்டும். கடித்த நாளிலிருந்து முதல் நாள் (0), 3வது நாள், 7வது நாள் மற்றும் 28வது நாள் என 4 தவணைகள் ரேபீஸ் தடுப்பூசியை போட்டுக் கொள்ள வேண்டும்.

நாய் கடியால் அதிகப்படியான காயம் ஏற்பட்டால், மேற்கண்ட தடுப்பூசி மட்டுமின்றி மருத்துவர் ஆலோசனையின் பேரில் இம்யுனோகுளோபுலின் (Immunoglobulin) மருந்தும் போட்டுக் கொள்ள வேண்டும். இத்தடுப்பூசி அனைத்து அரசு மருத்துவமனைகளிலும் மற்றும் அரசு ஆரம்ப சுகாதார நிலையங்களிலும் இலவசமாக வழங்கப்படுகிறது.

வீட்டு நாய்க்கு முறைப்படி ரேபீஸ் தடுப்பூசி போடப்படிருந்தாலும் அந்த நாயால் கடிக்கப்பட்டவர் ரேபீஸ் தடுப்பூசியினை கண்டிப்பாக போட்டுக் கொள்ள வேண்டும்.

9. வீட்டில் வளர்க்கப்படும் நாய்களுக்கு எவ்வாறு தடுப்பூசி போட வேண்டும் ?

- வீட்டில் நாய் வளர்ப்பவர்கள் அதற்கு ரேபீஸ் தடுப்பூசியை கண்டிப்பாகப் போட வேண்டும்.
- நாய்க்குட்டிக்கு 3 மாதத்தில் முதல் தவணையும், 4 மாதம் முடிந்ததும் இரண்டாவது தவணையும் ரேபீஸ் தடுப்பூசியை போட்டு விட வேண்டும். அடுத்து, ஆண்டுக்கு ஒரு முறை ரேபீஸ் பூஸ்டர் (ஊக்குவிப்பு தவணை) தடுப்பூசியை கட்டாயம் போட வேண்டும்.

- தெரு நாய்களுடன் வீட்டு நாய்களை சேராமல் பார்த்து கொள்ள வேண்டும்
- வீட்டு நாய்கள் சோர்வாக இருந்தாலோ, சாப்பிடாமல் இருந்தாலோ, எல்லோரையும் கடிக்க முற்பட்டாலோ அந்த நாயை உடனடியாக கால்நடை மருத்துவரிடம் காண்பித்து தகுந்த சிகிச்சை அளிக்க வேண்டும்.

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கூடுதல் தகவல்களுக்கு ☎ 104

உங்கள் பகுதியில் வெறிநாய்க்கடி நிகழ்வுகள் ஏற்பட்டால் உடனடியாக பொது சுகாதாரத் துறையின் 24X7 மணி நேர கட்டுப்பாட்டு மையத்தை தொடர்பு கொள்ளலாம். குறுஞ்செய்தியாகவும் தெரியப்படுத்தலாம்.

கைபேசி : 94443 40496 / 87544 48477

வெளியீடு:
பொது சுகாதாரம் மற்றும் நோய் தடுப்பு மருந்துத்துறை.
சென்னை - 6.

6. விலங்கு கடித்தவுடன் செய்யக் கூடாதவை யாவை ?

காயத்தின் மீது கண்ணாம்பு, கருக்கம்பால், எண்ணெய், காப்பிதூள் (அ) மாட்டு சாணம், மண் மற்றும் இலைகளை வைப்பதோ அல்லது தடவுவதோ கூடாது. மந்திரிப்பது போன்ற செயல்களை கண்டிப்பாக தவிர்க்க வேண்டும். ரேபீஸ் கிருமிகளால் தாக்கப்பட்ட நாய் எந்நேரமும் ஊளையிடுவது போல குரைத்துக் கொண்டே இருக்கும். ஓரிடத்தில் நில்லாமல், அங்கும் இங்கும் ஓடிக்கொண்டு இருக்கும். அருகில் வரும் அனைவரையும் தூரத்தி கடிக்க முற்படும். எந்நேரமும் நாக்கு வெளியே தள்ளி எச்சில் ஒழுகிக் கொண்டே இருக்கும். பொதுவாக ரேபீஸ் வந்த நாய் 10 நாட்களுக்குள் இறந்து விடும். நோய் வாய்ப்பட்டு ஒரே இடத்தில் படுத்துக் இக்கும் நாய் கூட ரேபீஸ் நோயால் பாதிக்கப் பட்டிருக்க வாய்ப்புண்டு.

7. யாரெல்லாம் கூடுதல் எச்சரிக்கையுடன் இருக்க வேண்டும்?

கால்நடை மருத்துவர்கள், கால்நடை பணியாளர்கள், நாய் பிடிப்போர், மிருககாட்சி சாலையில் பணிபுரிவோர், வனத்துறை அலுவலர்கள் ஆகியோர் முன்னெச்சரிக்கையாக ரேபீஸ் தடுப்பூசியை போட்டுக் கொள்வது நல்லது.

8. மனிதர்கள் முன்னெச்சரிக்கை ரேபீஸ் தடுப்பூசி போட்டுக் கொள்ளும் முறை :

முன்னெச்சரிக்கை ரேபீஸ் தடுப்பூசி கீழ்க்கண்டவாறு போட்டுக் கொள்ள வேண்டும்.

முதல் நாள்	முதல் தவணை
7வது நாள்	இரண்டாவது தவணை
21வது நாள்	மூன்றாவது தவணை

பின்னர் 6 மாதத்திற்கு ஒரு முறை உடல் நோய் எதிர்ப்பு சக்தி அளவினை ரத்தத்தின் மூலம் பரிசோதனை செய்து அதற்கேற்ப, ஊக்குவிப்பு தவணை தடுப்பூசி போட்டுக் கொள்ள வேண்டும்.

Our Vision

A Rabies-Free Tamil Nadu with a Scientifically Managed and Gradually Moderating Dog Population

1. Achieving the objective of eliminating rabies-related deaths in the State.
2. Reducing human-animal conflicts by enhancing the safety and welfare of both humans and animals.
3. Establishing a compassionate framework for the management of community dogs in the State
4. Controlling the rapid growth of the community dog population.
5. Prioritizing a policy focused on the management of female dogs in the population.
6. Recommending specific methods for identifying and vaccinating community dogs.
7. Identifying vulnerable zones such as schools, tourist areas, and hospitals and outlining strategies for managing community dogs in these areas.
8. Providing guidelines for the general public regarding responsible feeding practices.

Mass Vaccination Campaigns

The mass vaccination campaigns are humane and effective strategy for rabies control in community dogs. Collaborative efforts involving various stakeholders are vital for the success of these initiatives.

Similar to the Pulse Polio Vaccination Drive, the Anti-Rabies Mass Vaccination drive should also be conducted on dedicated days to combat rabies in community dogs. The approach emphasized the importance of vaccinating domestic animals. Such initiatives require a collaborative effort involving both veterinary and public health services. On priority basis the Urban Local Bodies may implement the program on mission mode.

Key Initiatives in Mass Vaccination

- Local authorities may collaborate with NGOs and animal welfare groups to organize mass vaccination campaigns. The campaigns may cover specific regions, each comprising two square kilometres, with dedicated teams responsible for vaccinating community dogs in their designated areas.
- Vaccinated animals can be easily identified by marking them with collars. It will ensure there is no duplication or omission during the vaccination process.

- To effectively control rabies, it is advisable to administer annual booster doses. This on-going effort helps maintain a strong level of immunity in the community dog population.
- Following the World Health Organization's (WHO) recommendation of achieving 70per cent vaccination coverage is crucial in the quest to eradicate rabies in the dog population.
- Veterinary students in their clinical years should be involved in the immunization drive.

Rabies Vaccination

All dogs included in an ABC program must receive vaccination against rabies, and should be administered before releasing the dogs. It is imperative to maintain a record of vaccinations for each batch, enabling follow-up vaccinations in subsequent years. The potency and cold chain integrity of the vaccine should be verified for every procurement batch.

Strengthening Human Resources Management

Efficient use of available resources, including skilled personnel, is crucial for the successful implementation of ABC programmes. It involves harnessing the expertise of veterinary surgeons, veterinary doctors, animal attenders, and internship students in collaboration with government-recognized NGOs and animal welfare organizations.

Evaluation of Programme-Records and Datasheets

Maintaining records is crucial in evaluating the Policy for Community Dog Management and Regulation and its associated intervention for several reasons. Records provide a clear and transparent account of all activities and decisions made within the policy and intervention framework. Transparency is essential for accountability to the public and stakeholders. The data can be used to measure progress and identify areas that require improvement.

Using an online data portal to maintain records for the evaluation of a community dog management intervention can significantly improve data management and accessibility. The detailed list and the kinds of records that can be maintained through an online data portal is attached in the annexure.

Institutional Framework for Monitoring Implementation

The State and Local Level Birth Control Implementation and Monitoring Committee formed under the Animal Birth Control Rules, 2023, shall also play the role of monitoring and implementing the policy as presented in the annexure.

Annexure

Annexure I – Dog Census as on 2019 as per the Directorate, Animal Husbandry Department

List of Taluk and Non Taluk Hospitals

Sl.No	District Name	Dog Population
1	Ariyalur	9015
2	Chennai	52836
3	Coimbatore	80242
4	Cuddalore	29964
5	Dharmapuri	44124
6	Dindigul	51047
7	Erode	82897
8	Kancheepuram	37709
9	Kanniyakumari	72301
10	Karur	23164
11	Krishnagiri	36038
12	Madurai	43954
13	Nagapattinam	32299
14	Namakkal	71510
15	Perambalur	4642
16	Pudukottai	36723
17	Ramanathapuram	12217
18	Salem	123297
19	Sivaganga	43859
20	Thanjavur	34955

Sl.No	District Name	Dog Population
21	The Nilgiris	10050
22	Theni	11958
23	Thiruvallur	27887
24	Thiruvarur	21714
25	Tiruchirappalli	40077
26	Thirunelveli	48984
27	Tiruppur	66394
28	Thiruvannamalai	8439
29	Tuticorin	43401
30	Vellore	45847
31	Villuppuram	25480
32	Virudhunagar	20631
Total		1296655

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
1	Kancheepuram	1	Sriperumbudur
	Kancheepuram	2	Uthiramerur
	Kancheepuram	3	Walajabad
2	Chengalpattu	4	Tambaram
	Chengalpattu	5	Thiruporur
	Chengalpattu	6	Thirukazhukundram
	Chengalpattu	7	Cheyyur
	Chengalpattu	8	Madhuranthagam
	Chengalpattu	9	Mamallapuram
3	Thiruvallur	10	Ponneri
	Thiruvallur	11	Gummudipoondi
	Thiruvallur	12	Uthukottai
	Thiruvallur	13	Pallipet
	Thiruvallur	14	Tiruttani
	Thiruvallur	15	Podhatturpet
	Thiruvallur	16	Pulicat
	Thiruvallur	17	Poonamallee
	Thiruvallur	18	Avadi
	Thiruvallur	19	Podhatturpet
	Thiruvallur	20	Pulicat
4	Vellore	21	Vellore
	Vellore	22	Gudiyatham
	Vellore	23	Pernambut
	Vellore	24	Natrampalli
5	Tirupattur	25	Tirupattur
	Tirupattur	26	Vaniyambady
	Tirupattur	27	Ambur
	Tirupattur	28	Natrampalli

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
6	Ranipet	29	Arakkonam
	Ranipet	30	Arcot
	Ranipet	31	Kalavai
	Ranipet	32	Sholinghur
7	Tiruvannamalai	33	Chengam
	Tiruvannamalai	34	Polur
	Tiruvannamalai	35	Kalsapakkam
	Tiruvannamalai	36	Thandrampattu
	Tiruvannamalai	37	Chetpet
	Tiruvannamalai	38	Thanipadi
	Tiruvannamalai	39	Arni
	Tiruvannamalai	40	Vandavasi
	Tiruvannamalai	41	Vembakkam
8	Cuddalore	42	Kattumannarkoil
	Cuddalore	43	Tiittagudi
	Cuddalore	44	Kurinjipadi
	Cuddalore	45	Parangipet
	Cuddalore	46	Chidambaram
	Cuddalore	47	Panruti
	Cuddalore	48	Vridhachalam
9	Villupuram	49	Villupuram
	Villupuram	50	Tindivanam
	Villupuram	51	Gingee
	Villupuram	52	Vanur
	Villupuram	53	Vikkiravandi
	Villupuram	54	Marakkanam
	Villupuram	55	Valavanur
10	Kallakurichi	56	Sankarapuram

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
	Kallakurichi	57	Ulundurpetttai
	Kallakurichi	58	Thirukoilur
	Kallakurichi	59	Chinnasalem
11	Thanjavur	60	Thiruvaiyaru
	Thanjavur	61	Thiruvidaimarthur
	Thanjavur	62	Papanasam
	Thanjavur	63	Pattukottai
	Thanjavur	64	Orathanadu
	Thanjavur	65	Peravurani
	Thanjavur	66	Budalur
	Thanjavur	67	Aduthurai
	Thanjavur	68	Thiruppanandal
	Thanjavur	69	Nachiarkovil
	Thanjavur	70	Adirampattinam
	Thanjavur	71	Ayyampettai
	Thanjavur	72	Thirukattupalli
12	Thiruvarur	73	Nannilam
	Thiruvarur	74	Kudavasal
	Thiruvarur	75	Valangaiman
	Thiruvarur	76	Needamangalam
	Thiruvarur	77	Thiruthuraipoondi
	Thiruvarur	78	Koothanallur
13	Nagapattinam	79	Keelvelur
		80	Thirukkuvalai
		81	Vedaranyam
		82	Nagoor
		83	Karuppambulam
		84	Poraiyar

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
14	Mayiladuthurai	85	Kuthalam
		86	Sirkhazhi
		87	Vaitheeswarankovil
		88	Tharangambadi
15	Trichy	89	Thuvakudi
		90	Thuraiyur
		91	Thottiyam
		92	Musiri
		93	Srirangam
		94	Omandur
		95	Thuvaranguruchi
		96	Lalgudi
		97	Mannachanallur
16	Karur	98	Aravakurichi
		99	Kovakulam
		100	Manmangalam
		101	Mylamapatti
		102	Pallapatti
		103	Velayuthampalayam
17	Ariyalur	104	Sendurai
		105	Udaiyarpalayam
		106	Jayankondam
18	Perambalur	107	Krishnapuram
		108	Veppur
		109	Karai
19	Pudukkottai	110	Valayapatti
		111	Keeranur
		112	Iluppur

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
		113	Thirumayam
		114	GH Viralimalai
		115	Thirukokarnam
		116	Annavasal
		117	Manamelkudi
		118	Avudaiyarkovil
		119	Alangudi
		120	Karambakudi
		121	Gandarvakottai
		122	Subramaniyapuram
20	Madurai	123	Tirumangalam
		124	Peraiyur
		125	Melur
		126	Vadpatti
		127	Sholavandan
21	Theni	128	Aundipatti
		129	Bodi
		130	Uthamapalayam
		131	Chinnamanur
		132	Cumbum
22	Dindigul	133	Nilakottai
		134	Athoor
		135	Natham
		136	Pattiveeranpatti
23	Palani	137	Palani
		138	Oddanchatram
		139	Kodaikanal
		140	Vedasandur

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
		141	Pannaikadu
		142	Thandikudi
		143	Ayakudi
24	Ramanathapuram	144	Thiruvadanai
		145	Rameswaram
		146	Keelakarai
		147	Panaikulam
		148	Mandapam Camp
	Paramakudi	149	Kamuthi
		150	Kadaladi
		151	Mudhukulathur
25	Sivaganga	152	Thiruppathur
		153	Devakottai
		154	Manamadurai
		155	Ilayangudi
		156	Thiruppuvanam
		157	Kalayarkoil
		158	Singampuneri
		159	Pulankurichi
		160	Kandanur Kanadukathan
26	Virudhunagar	161	Ambasamuthiram
		162	Radhapuram
		163	Nanguneri
		164	Cheranmahadevi
		165	Vallioor
		166	Melapalayam
		167	Koodankulam
		168	Kalakadu

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
27	Tenkasi	169	Kadayanallur
		170	Shenkottai
		171	Sankarankoil
		172	Alankulam
		173	Sivagiri
		174	V.K.Puthur
		175	Puliankudi
		176	Ayikudi
28	Thoothukudi	177	Srivaikundam
		178	Tiruchendur
		179	Sathankulam
		180	Kayalpattinam
		181	Kalankudieruppu
		182	Ettayapuram
		183	Vilathikulam
		184	Ottapidaram
29	Kannyakumari	185	Boothapandy
		186	Kuzhithurai
		187	Colachel
		188	Kanyakumari
		189	Karungal
		190	Senamvilai
30	Salem	191	Sankari
		192	Omalur
		193	Edapadi
		194	Jalagandapuram
		195	Vembadithalam
		196	Nainampatti

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
		197	Attur
		198	Yercaud
		199	Ganagavalli
		200	Valappady
		201	P.N.Palayam
31	Namakkal	202	P.Velur
		203	Komarapalayam
		204	Sendamangalam
		205	Tiruchengode
		206	Kolli Hills
		207	Pallipalayam
		208	Vennandur
32	Dharmapuri	209	Harur
		210	Pappireddipatti
		211	Palacode
33	Krishnagiri	212	Hosur GH
		213	Denkanikottai GH
		214	Pochampalli GH
		215	Uthangarai GH
		216	Mathur GH
		217	Barugur GH
34	Coimbatore	218	Mettupalayam
		219	Valparai
		220	V.K.Pudur
		221	Kottur
		222	Thondamuthur
		223	P.N.Palayam
		224	Annur

Sl.No	District	Sl.No	Taluk and Non Taluk Hospital
		225	Sulur
		226	Kolarpatty
35	Thiruppur	227	Avinashi
		228	Palladam
		229	Udumalai
		230	Kangayam
		231	Dharapuram
		232	Uthukuli
		233	Madathukulam
		234	Karadivavi
		235	Jallipatti
36	Erode	236	Sathy
		237	Bhavani
		238	Perundurai
		239	Gobi
		240	Anthiyur
37	The Nilgiris	241	Kodumudi
		242	Kavundapadi
		243	Manjoor
		244	Coonoor
		245	Kotagiri
		246	Pandalur
38	Chennai		

List of Contributors

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Sl. No	District	HUD	Block	UG PHC	Main PHC	Addl. PHC	Total Rural PHC	Rural HSC	Urban PHC	Urban HSC	DMS & ESI	DME with Attached Hospital
1	Kancheepuram	Kancheepuram	5	5	1	17	23	143	5	26	5	
2	Chengalpattu	Chengalpattu	8	8	1	28	37	221	12	63	6	4
3	Tiruvallur	Tiruvallur	13	13	2	37	52	280	3	15	9	1
4	Tiruvallur	Poonamallee	1	1		4	5	23	8	39	2	0
5	Vellore	Vellore	7	7	1	25	33	157	13	64	5	2
6	Tirupathur	Tirupathur	6	9		23	32	134	5	28	4	0
7	Ranipet	Ranipet	7	8	1	23	32	163	4	22	6	0
8	Tiruvannamalai	Tiruvannamalai	10	12	1	39	52	253	3	14	5	2
9	Tiruvannamalai	Cheyyar	8	8	1	32	41	157	3	14	6	
10	Cuddalore	Cuddalore	14	20	2	42	64	319	7	40	12	1
11	Villupuram	Villupuram	13	13	1	48	62	345	3	21	7	2
12	Kallakurichi	Kallakurichi	9	9		35	44	212	1	5	5	1
13	Thanjavur	Thanjavur	14	15	1	53	69	309	8	43	15	4
14	Tiruvarur	Tiruvarur	10	11	2	33	46	195	4	20	9	2
15	Nagapattinam	Nagapattinam	6	5		19	24	111	3	15	6	1
16	Mayiladuthurai	Mayiladuthurai	5	7	1	21	29	147	2	11	5	0
17	Tiruchirapalli	Tiruchirapalli	14	15	1	48	64	307	20	99	13	5
18	Karur	Karur	8	8	1	23	32	168	5	26	9	2
19	Ariyalur	Ariyalur	6	6		31	37	117	2	8	5	
20	Perambalur	Perambalur	4	4	1	23	28	90	1	5	6	0
21	Pudukottai	Pudukottai	7	7	2	31	40	125	2	11	6	2
22	Pudukottai	Aranthangi	6	7	2	24	33	117	1	4	8	
23	Madurai	Madurai	13	13		41	54	314	34	168	10	8

Sl. No	District	HUD	Block	UG PHC	Main PHC	Addl. PHC	Total Rural PHC	Rural HSC	Urban PHC	Urban HSC	DMS & ESI	DME with Attached Hospital
24	Theni	Theni	8	8	3	24	35	162	6	30	7	2
25	Dindigul	Dindigul	7	9		26	35	167	4	20	7	
26	Dindigul	Palani	7	8	1	22	31	144	3	15	8	0
27	Ramanathapuram	Ramanathapuram	5	6	2	18	26	112	3	14	6	1
28	Ramanathapuram	Paramakudi	6	7		21	28	132	2	9	4	0
29	Sivaganga	Sivaganga	12	12	2	34	48	275	4	20	18	2
30	Virudhunagar	Virudhunagar	5	8		12	20	114	2	15	4	1
31	Virudhunagar	Sivakasi	6	6		25	31	131	5	33	7	0
32	Tirunelveli	Tirunelveli	9	11	1	29	41	202	11	51	10	3
33	Tenkasi	Tenkasi	10	11		35	46	177	6	31	10	0
34	Tuticorin	Tuticorin	7	7	2	19	28	144	8	41	5	2
35	Tuticorin	Koilpatti	5	6	2	14	22	109	2	9	5	0
36	Kanyakumari	Nagercoil	9	10	2	27	39	267	8	40	10	2
37	Salem	Salem	12	13		37	50	230	18	94	4	1
38	Salem	Attur	8	10		27	37	168	2	10	5	0
39	Namakkal	Namakkal	15	15	3	37	55	240	8	37	11	0
40	Dharmapuri	Dharmapuri	10	9	4	37	50	218	1	7	5	2
41	Krishnagiri	Krishnagiri	10	13	2	41	56	239	5	31	9	0
42	Coimbatore	Coore	12	12		39	51	328	38	183	14	5
43	Tiruppur	Tiruppur	13	14	3	29	46	242	21	106	10	1
44	Erode	Erode	14	14	3	46	63	311	13	64	9	2
45	The Nilgiris	The Nilgiris	4	4	1	28	33	194	4	22	7	1
46	Chennai								140		6	51
		Grand Total	**388**	**424**	**53**	**1327**	**1804**	**8713**	**463**	**1643**	**345**	

List of Anti- Rabies Clinic

Sl.No	Name of the Medical College & Institution
1	Government Madras Medical College - Chennai
2	Government Stanley Medical College - Chennai
3	Government Kilpauk Medical College - Chennai
4	Government Chengalpattu Medical College, Chengalpattu
5	Government Thanjavur Medical College, Thanjavur
6	Government Madurai Medical College, Madurai
7	Government Coimbatore Medical College, Coimbatore
8	Government Tirunelveli Medical College, Tirunelveli
9	Government Mohan Kumaramangalam Medical College, Salem
10	Government K.A.P. Viswanatham Medical College - Trichy
11	Government Thoothukudi Medical College, Thoothukudi
12	Government Vellore Medical College, Vellore
13	Government Kanniyakumari Medical College, Kanniyakumari
14	Government Theni Medical College
15	Government Dharmapuri Medical College, Dharmapuri
16	Government Villupuram Medical College, Villupuram
17	Government Thiruvarur Medical College. Thiruvarur
18	Government Sivagangai Medical College, Sivagangai
19	Government Thiruvannamalai Medical College, Thiruvannamalai
20	Government Medical College, Omandurar Government Estate, Chennai
21	Government ESI Medical College, Coimbatore
22	Government Pudukottai Medical College, Pudukottai
23	Government Karur Medical College, Karur
24	Government Erode Medical College, Perundurai, Erode
25	Government Medical College, The Nilgiris
26	Government Medical College, Tiruppur

Sl.No	Name of the Medical College & Institution
27	Government Medical College, Dindigul
28	Government Medical College, Namakkal
29	Government Medical College, Ramanathapuram
30	Government Medical College, Virudhunagar
31	Government Medical College, Nagapattinam
32	Government Medical College, Krishnagiri
33	Government Medical College, Thiruvallur
34	Government Medical College, Ariyalur
35	Government Medical College, Kallakurichi
36	Government Medical College, and Hospital, Cuddalore

List of Municipalities and Corporations

MUNICIPALITIEST

Sl.No	Name of the HUD	Sl.No	Name of the Municipality
1	Kancheepuram	1	Kundrathur
		2	Mangadu
2	Chengalpattu	3	Chengalpet
		4	Maduranthakam
		5	Maraimalainagar
		6	Nandivaram-Guduvancheri
3	Thiruvallur	7	Thiruvallur
		8	Tiruthani
		9	Poonamallee
		10	Thiruverkadu
		11	Ponneri
		12	Thiruninravur
4	Vellore	13	Gudiyatham
		14	Pernambut
5	Thirupathur	15	Thirupattur
		16	Vaniyambadi
		17	Ambur
		18	Jolerpet
6	Ranipet	19	Arakkonam
		20	Arcot
		21	Ranipet
		22	Walajapet
		23	Solinghur
		24	Melvisharam

Sl.No	Name of the HUD	Sl.No	Name of the Municipality
7	Thiruvannamalai	25	Thiruvannamalai
		26	Arani
		27	Thiruvathipuram(Cheyyar)
		28	Vandavasi
8	Cuddalore	29	Chidambaram
		30	Virudachalam
		31	Panruti
		32	Vadalur
		33	Nellikuppam
		34	Thittakudi
9	Villupuram	35	Villupuram
		36	Tindivanam
		37	Kottakuppam
10	Kallakurichi	38	Kallakurichi
		39	Thirukkovilur
		40	Ulundurpettai
11	Thanjavur	41	Pattukottai
		42	Adiramapattinam
12	Thiruvarur	43	Thiruvarur
		44	Mannarkudi
		45	Koothanallur
		46	Thiruthuraipoondi
13	Nagapattinam	47	Nagapattinam
		48	Vedaranyam
14	Mayiladuthurai	49	Mayiladuthurai
		50	Sirkali
15	Trichy	51	Manapparai
		52	Thuvakudi
		53	Musiri

Sl.No	Name of the HUD	Sl.No	Name of the Municipality
		54	Thuraiyur
		55	Lalkudi
16	Karur	56	Kulithalai
		57	Pugalur
		58	Pallapatti
17	Ariyalur	59	Ariyalur
		60	Jayankondam
18	Perambalur	61	Perambalur
19	Pudukottai	62	Pudukottai
		63	Aranthangi
20	Madurai	64	Thirumangalam
		65	Usilampatti
		66	Melur
21	Theni	67	Theni
		68	Bodinayakkanur
		69	Kambam
		70	Chinnamanur
		71	Gudalur
		72	Periyakulam
22	Dindigul	73	Palani
		74	Oddanchatram
		75	Kodaikanal
23	Ramanathapuram	76	Ramanathapuram
		77	Paramakudi
		78	Rameswaram
		79	Kilakarai
24	Sivagangai	80	Sivagangai
		81	Devakottai
		82	Karaikkudi

Sl.No	Name of the HUD	Sl.No	Name of the Municipality
		83	Manamadurai
25	Virudhunagar	84	Virudhunagar
		85	Rajapalayam
		86	Srivilliputhur
		87	Sattur
		88	Aruppukkottai
26	Thirunelveli	89	Ambasumudram
		90	Kalakkadu
		91	Vikramasingapuram
27	Tenkasi	92	Tenkasi
		93	Sankarankovil
		94	Puliyankudi
		95	Kadayanallur
		96	Surandai
		97	Sengottai
28	Thoothukudi	98	Kovilpatti
		99	Kayalpattinam
		100	Tiruchendur
29	Kanyakumari	101	Kuzhithurai
		102	Colachel
		103	Padmanabhapuram
		104	Kollankodu
30	Salem	105	Edappadi
		106	Attur
		107	Narasingapuram
		108	Tharamangalam
		109	Mettur
		110	Edaganasalai
31	Namakkal	111	Namakkal

Sl.No	Name of the HUD	Sl.No	Name of the Municipality
		112	Thiruchengodu
		113	Pallipalayam
		114	Kumarapalayam
		115	Rasipuram
32	Dharmapuri	116	Dharmapuri
33	Krishnagiri	117	Krishnagiri
34	Coimbatore	118	Mettupalayam
		119	Pollachi
		120	Valparai
		121	Karamadai
		122	Madhukarai
		123	Gudalur
		124	Karumathampatti
35	Thirupur	125	Palladam
		126	Dharapuram
		127	Kangeyam
		128	Vellakovil
		129	Udumalaipettai
		130	Thirumuruganpooni
		131	Avanashi
36	Erode	132	Punjai Puliampatti
		133	Bhavani
		134	Gobichettipalayam
		135	Sathyamangalem
37	Nilgiris	136	Udugamandalam
		137	Coonoor
		138	Gudalur
		139	Nelliyalam
38	Chennai Corp		

CORPORATIONS

Sl.No	Name of the District	Name of the Corporation
1	Chennai	Chennai Corporation
2	Thiruvallur	Avadi Corporation
3	Kancheepuram	Kancheepuram Corporation
4	Chengalpet	Tambaram Corporation
5	Vellore	Vellore Corporation
6	Cuddalore	Cuddalore Corporation
7	Tiruchirappalli	Thirunelveli Corporation
8	Karur	Karur Corporation
9	Dindigul	Dindigul Corporation
10	Madurai	Madurai Corporation
11	Krishnagiri	Hosur Corporation
12	Thanjavur	Thanjavur Corporation
13	Thanjavur	Kumbakonam Corporation
14	Nagercoil	Nagercoil Corporation
15	Salem	Salem Corporation
16	Coimbatore	Coimbatore Corporation
17	Erode	Erode Corporation
18	Tiruppur	Tiruppur Corporation
19	Virudhunagar	Sivakasi Corporation
20	Thirunelveli	Thirunelveli Corporation
21	Thoothukudi	Thoothukudi Corporation

“‘One Health’:
Dog Mediated Rabies
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