स्वास्थ्य एवं
परिवार कल्याण मंत्रालय
MINISTRY OF
HEALTH AND
FAMILY WELFARE
सत्यमेव जयते

NATIONAL HEALTH MISSION
NAGALAND

UNITY
GOVERNMENT OF NAGALAND

National Rabies Control Programme
Adopt One Health • Stop Rabies

राष्ट्रीय रोग नियंत्रण केन्द्र
NATIONAL CENTRE FOR DISEASE CONTROL DELHI
दिल्ली ११००५४

STATE ACTION PLAN FOR DOG MEDIATED RABIES ELIMINATION, NAGALAND BY 2030

Government of Nagaland
Department of Health & Family Welfare

STATE ACTION PLAN FOR DOG MEDIATED RABIES ELIMINATION FROM NAGALAND BY 2030

ABBREVIATIONS	
ABC	Animal Birth Control
ARC	Anti -Rabies Clinic
ARS	Anti-Rabies Serum
ARV	Anti-Rabies Vaccine
ASCAD	Assistance to States for Control of Animal Diseases
AWBI	Animal Welfare Board of India
AWOs	Animal Welfare Organizations
CHC	Community Health Centre
CMO	Chief Medical Officer
CNR	Catch-Neuter-Release
CSF	Cerebrospinal Fluid
CVO	Chief Veterinary Officer
DAHD	Department of Animal Husbandry and Dairying
DFA	Direct Fluorescent antibody Assay
DHFW	Directorate of Health & Family Welfare
DPM	Dog Population Management
dRIT	Direct Rapid Immuno-histochemistry Test
DSO	District Surveillance Officer
ELISA	Enzyme-Linked Immuno-Sorbent Assay
FAO	Food and Agriculture Organization
FAT	Fluorescent Antibody Test
GARC	Global Alliance for Rabies Control
HRIG	Human Rabies Immuno-globulins
ID	Intra-dermal
IDSP	Integrated Disease Surveillance Programme
IEC	Information, Education and Communication
IHIP	Integrated Health Information Platform
KAP	Knowledge, Attitude and Practices
LGB	Local Governing Body
LFA	Lateral Flow Assay
MDV	Mass Dog Vaccination
MoHFW	Ministry of Health & Family Welfare
MVU	Mobile Veterinary Unit

NAAT	Nucleic Acid Amplification Test
NAPRE	National Action Plan for Rabies Elimination
NCDC	National Centre for Disease Control
NERDDL	North Eastern Regional Disease Diagnostic Laboratory
NGO	Non-Government Organisation
NHAK	Naga Hospital Authority Kohima
NHM	National Health Mission
NRCP	National Rabies Control Programme
NTCA	National Tiger Conservation Authority
NTD	Neglected Tropical Diseases
PCR	Polymerase Chain Reaction
PEP	Post-exposure Prophylaxis
PHC	Primary Health Centre
PrEP	Pre-exposure Prophylaxis
RDT	Rapid Diagnostic Test
RIG	Rabies Immuno-globulins
RRL	Regional Referral Laboratories
RRT	Rapid Response Team
SAPRE	State Action Plan for Rabies Elimination
SNO	State Nodal officer
SOP	Standard Operating Procedure
SSU	State Surveillance Unit
TOR	Terms of Reference
TOT	Training of Trainers
WOAH	World Organization for Animal Health
WPA	Wildlife Protected Area

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CHAPTER 1 INTRODUCTION

Rabies is one of the oldest diseases known to man and has been widely documented by the early civilizations**.** It is almost hundred percent fatal yet hundred percent preventable by proper vaccination of both Humans and Animals. Rabies virus is a Neurotropic virus and that affects the Central Nervous System of mammals, ultimately causing disease in the brain and death. Rabies Lyssavirus, like many Rhabdoviruses, has an extremely wide host range. In the wild, it has been found 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.

Rabies is one of the Neglected Tropical Diseases (NTD) that mainly affects already marginalized, poor and vulnerable populations. It is reported in more than 150 countries on all continents, with the exclusion of Antarctica. The main burden of disease is reported in Asia and Africa, but some cases have been reported also in Europe in the past 10 years, especially among travellers.

Europe	**:**	**Fox, Bats**
Middle East	**:**	**Wolf, Dogs**
Asia	**:**	**Dog**
Africa	**:**	**Dog, Mongoose, Antelope**
North America	**:**	**Foxes, Skunks, Racoons, Insectivorous Bats**
South America	**:**	**Dogs, Vampire Bats**

According to WHO, globally, there are 59,000 human deaths annually due to Dog-Mediated Rabies in over 150 countries, with 95% of cases occurring in Africa and Asia. Due to widespread under reporting and uncertain estimates, it is likely that this number is a gross underestimate of the true burden of the disease.

In India, Rabies is endemic in all States/UTs except Andaman and Nicobar, and Lakshadweep Islands and is estimated that 20,000 human deaths occur due to rabies and 17.4 million animal bites occur per year. As per the WHO-APCRI 2004 Survey, India contributes to one-third of the total global burden due to rabies and two-third of rabies burden in the South East Asia Region worldwide. Dogs are responsible for about 96% of Human Rabies, followed by cats (2%), jackals, mongoose and others (1%).Therefore, the disease is mainly transmitted by the bite of a Rabid dog. Although Rabies affects people of all age groups, children are the most vulnerable, which constitutes 40% of people exposed to dog bites in Rabies-endemic areas.

In 2015, the world called for action by setting a goal of **"Zero human dog-mediated rabies deaths by 2030"**, worldwide. Subsequently, four organizations – the World Health Organization (WHO), the World Organization for Animal Health (WOAH), the Food and Agriculture Organization (FAO) of the United Nations and the Global Alliance for Rabies Control (GARC) – have joined forces, as the United Against Rabies collaboration, and are determined to reach the global target of "Zero human deaths due to dog-mediated Rabies by 2030". Worldwide, harmonized processes are required to acknowledge and measure country progress towards this goal (NRCP).

The importance of the disease was brought to limelight with the implementation of National Rabies Control Programme (NRCP) in India during the 12th Five Year Plan to control this Neglected Tropical Disease.

To achieve the global target of Zero Human Dog- Mediated Rabies Death by 2030, India has launched the National Action Plan for Dog Mediated Rabies Elimination (**NAPRE**) from India by 2030 on 28th September, 2021 based on 'One Health Approach'. As per NAPRE guidelines, states are supposed to prepare the State Action Plan for Rabies Elimination (**SAPRE**) for their respective State/UT.

NAPRE envisages developing a dedicated portal and GIS-enabled electronic surveillance system for establishing a Joint Rabies Surveillance Network and Integrated Data sharing mechanism for local, state, and central agencies. The portal would provide essential information on animal Rabies, human Rabies, dog bites, availability of Rabies vaccine &Immunoglobulins for the states and other partner organizations on real-time Basis. This system would provide linkages between health, veterinary, and wildlife sectors at an appropriate level and thus enable systematic data sharing on agreed parameters identified in the NAPRE. This will help to analyse the situation and strengthen inter-sectoral coordination and appropriate public health actions by concerned stakeholders.

In this context, The Division of Zoonotic Diseases Program, National Centre for Disease Control (NCDC), Ministry of Health and Family Welfare organized a two-day workshop for developing a State Action Plan for Dog Mediated Rabies Elimination with 'One Health' approach for North Eastern states (Arunachal Pradesh, Assam, Meghalaya, Mizoram, Nagaland, Sikkim, Tripura) at 'Kiranshree Grand Hotel', Guwahati, Assam on 18th and 19th May, 2023 in collaboration with WHO.

National Rabies Control Programme (NRCP)

The objective of NRCP is to prevent deaths due to Rabies in humans. National Centre for Disease Control is the Nodal Centre for implementation of this Programme. The key strategies of the Programme are:

1. Provision of Rabies Post Exposure Prophylaxis
2. Strengthening Surveillance of Animal bites/Human Rabies
3. Capacity building of Health Care Professionals for appropriate management of Animal Bite Victims
4. Strengthening Laboratories Diagnosis of Rabies
5. Increase awareness about Rabies in the Community
6. Strengthening Inter-sectoral Collaboration with other Sectors

Rabies is a typical example of a Zoonotic disease that does not fit into the domain of single department having the responsibility of controlling Rabies. Although there is an animal reservoir involved, mortality and morbidity mainly affect human beings. Therefore, for prevention, control and elimination of Rabies an effective and concerted effort from the Animal Husbandry sector, Human Health sector, Local Governing Bodies, Communities and other stakeholders, is the need of the hour.

CHAPTER 2 EPIDEMIOLOGY OF RABIES IN NAGALAND

Epidemiology is the study of the distribution, occurrence, and determinants of disease and health in a population, and how to prevent and control them. Epidemiological information is used to plan and evaluate strategies to prevent infections and as a guide to the management of patients in whom the disease has already developed.

Epidemiological importance of Rabies in the State

Nagaland has a pet dog population of 1,56,690 in total (as per the 20th livestock census, 2018).

Rabies is commonly transmitted by animals especially dogs, followed by cats and other animals. Although, Nagaland does not have much of free roaming stray dogs, a number of bite cases by pet dogs and other animals are reported every year (Table 1).

Table 1: Year wise Animal bites and PEP (2018-25)

Year	Total No. of Animal bites (Dog)	Bites by other Animals	People receiving PEP	People receiving RIG additional to PEP
2018	249	NA	NA	NA
2019	490	NA	NA	NA
2020	588	NA	NA	NA
2021	488	48	94	NA
2022	453	215	138	NA
2023	716	452	1124	NA
2024	2324	576	2747	15
2025 (till July)	1724	379	2077	206

Source: The Animal bite records for 2018-2022 were obtained from IDSP weekly SPL formats. From 2023 onwards, the animal bite (Dog/others) were obtained from the NRCP monthly reporting format.

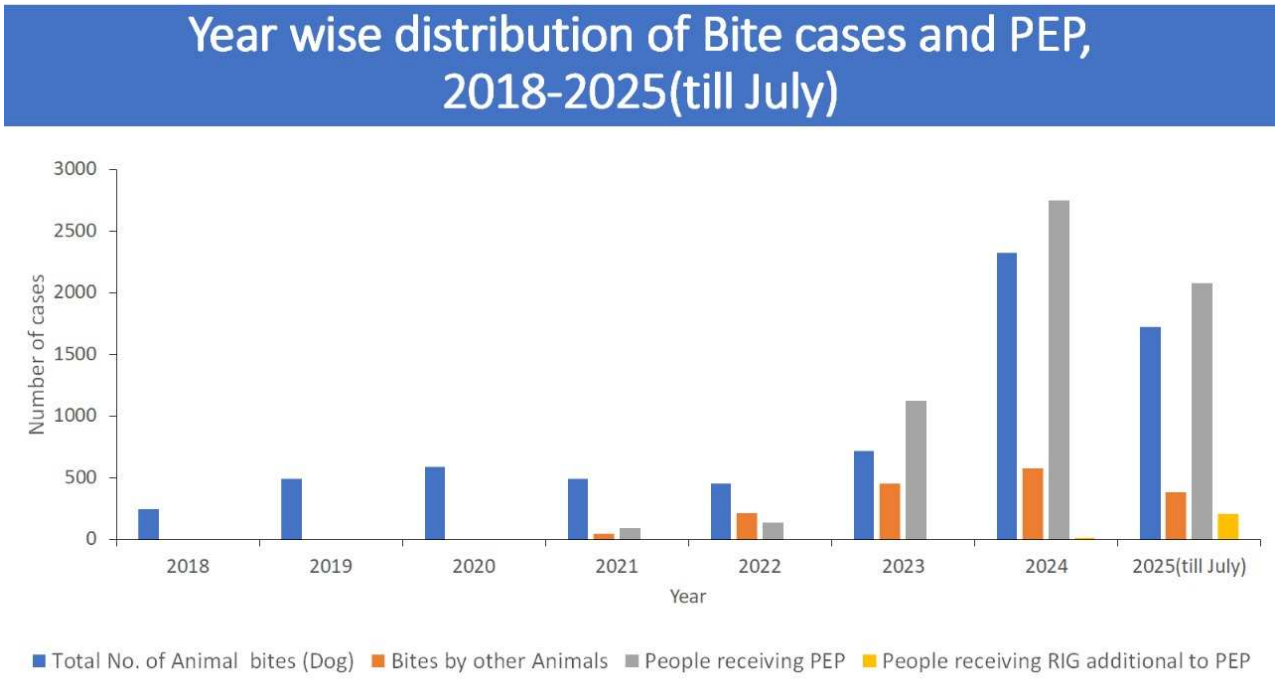


Fig 1. Year wise distribution of Animal bite cases and PEP, 2018-2025 (till July)

Epidemiological status in animal and human

In Nagaland, a number of animal bite cases are reported every year which predisposes Rabies infection. In 2021, 2024 and 2025 (till July), Clinically Suspected and Laboratory Confirmed Rabies cases were reported in the state (Table 2).

Table 2: Year wise Human Rabies cases (2018-25)

Year	No. of Clinically Suspected Rabies Cases	No. of Rabies Cases Discharged as LAMA	No. of Laboratory Confirmed Rabies Cases
2018	**0**	**0**	**0**
2019	**0**	**0**	**0**
2020	**0**	**0**	**0**
2021	**2**	**0**	**0**
2022	**0**	**0**	**0**
2023	**0**	**0**	**0**
2024	**3**	**0**	**1**
2025 (till July)	**4**	**0**	**1**

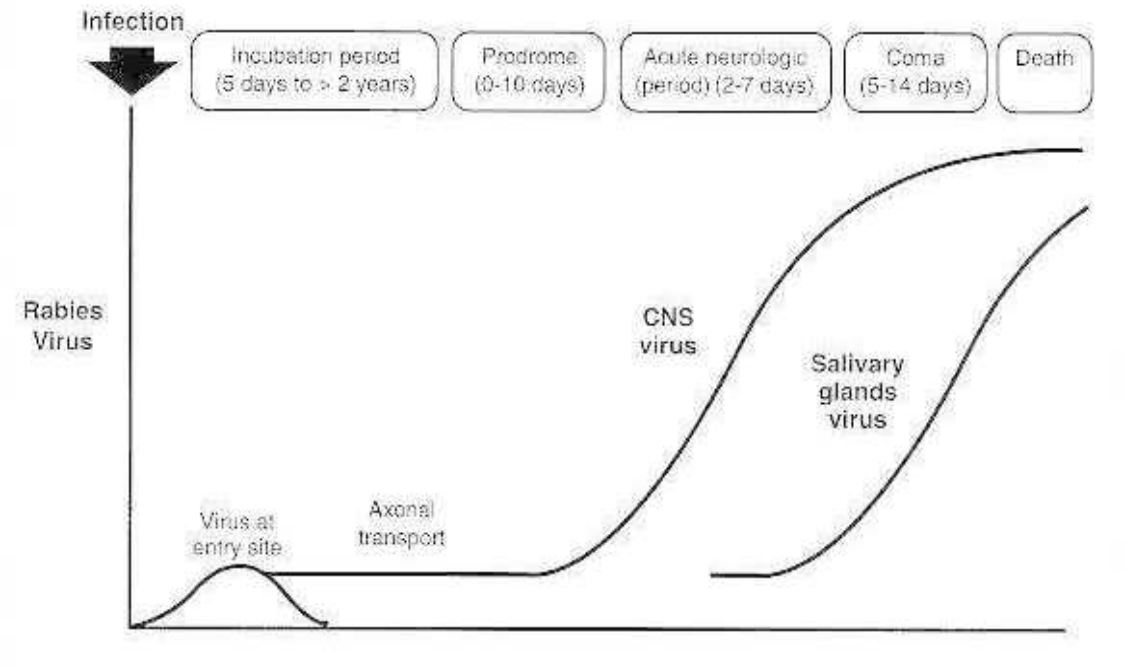
Existing Surveillance or epidemiological data on Rabies in dogs

Presently, the Department of Animal Husbandry and Veterinary does not have any reporting mechanism for suspected or laboratory confirmed cases of animal rabies, rabies vaccinations and dog population management. A separate mechanism through digital platform will be established and Mobile Veterinary Unit (MVU) utilized for active surveillance. A toll-free number 1962 is being used in parallel with other diseases. The veterinarians and para-veterinarians will be trained for animal rabies sample collection and rabies surveillance, and monitoring and funds for the same will be explored through the existing Assistance to States for Control of Animal Diseases (ASCAD) schemes. The State will conduct a study on identification of hotspots and risk areas. The prevalence in the neighbouring States will be studied for forecasting and preparation of strategy. The State is also implementing The Prevention and Control of Infectious and Contagious Diseases in Animals Act, 2009, and quarantine facilities will be established for suspected animals at various hotpots in the State. The College of Veterinary Sciences and Animal Husbandry, Jalukie will be utilized for animal healthcare facilities in coordination with North Eastern Regional Disease Diagnostic Laboratory (NERDDL), Khanapara, Guwahati. Standard Operating Procedures (SOPs) will be prepared in consultation with the National Centre for Disease Control (NCDC).

CHAPTER 3 RABIES BIOLOGICAL

The commonest mode of transmission in man is by the bite of a rabid animal or the contamination of scratch wounds by virus- infected saliva. However, other routes have been implicated in the past, such as through mucous membranes of the mouth, conjunctiva, anus and genitalia. Infection by aerosol transmission had been demonstrated in experimental animals and has been implicated in human infection in Rabies-infected bat caverns and in several laboratory accidents. Man to man transmissions by transplantation of infected corneas were also reported in few instances.

Importance of OI



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 symptom of panic when presented with liquids to drink. Early symptoms can include fever and tingling 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, inability to move parts of the body, confusion, and loss of consciousness.

Once symptoms appear, the result is virtually always death, regardless of treatment. The time period between contracting the disease and the start of symptoms is usually one to three months but can vary from less than one week to more than one year. The time depends on the distance the virus must travel along peripheral nerves to reach the central nervous system.

Human Rabies case can be presented in two forms:

1. **Classic rabies encephalitis** (80%): equivalent to '**furious rabies'** in dogs: Symptoms are initially non-specific with general systemic symptoms, anorexia, irritability, inspiratory spasms and cough, autonomic dysfunction and altered mental status. With time, classic symptoms and rabies encephalitis develop including hydrophobia, aerophobia and hyper salivation, agitation and even priapism. Death occurs after a few days due to cardio-respiratory arrest.

2. **Paralytic rabies** (20%): equivalent to '**dumb rabies'** in dogs: also known as 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 rabid animal and onset of rabid symptoms) of the disease varies from few days to few months in humans and depends on:
1) Site of exposure - This affects the distance that virus has to travel to reach the central nervous system.
2) Severity of exposure, etc.

The average incubation period for rabies in humans is estimated between 30-90 days. It ranges between 2weeks to 6 years. Because of the wide range of incubation period, post-exposure prophylaxis should be given as soon as possible, however, it should not be denied to persons reporting late.

Active antibody can be achieved by administering potent and safe cell cultured vaccine *via* intramuscular (IM) or Intradermal (ID) route for category II and III type of Animal bite cases. Intradermal (ID) route involves the injection of 0.1 ml of reconstituted vaccine on two sites per visit (one on each deltoid area, an inch above the insertion of deltoid muscle) on days **0, 3, 7 and 28.** Day 0 is the date of administration of the first dose of rabies vaccine.

The course for post-exposure prophylaxis of IM consists of five injections, one dose (0.5 or 1 ml as per the approval of the brand) each given on **days 0, 3, 7, 14 and 28**. The treatment may be modified if the suspected dog or cat involved in the incident is healthy after a 10-day observation period and Post-Exposure Prophylaxis (PEP) can be converted to Pre-Exposure Prophylaxis (PrEP) by skipping the vaccine dose on day 14 and administering it on day 28 while using **IM regimen** (Essen Schedule). While using **ID route** of administration, complete course of vaccination should be given irrespective of the status of the animal.

Mechanism of immune response

Single-dose (0.5ml or 1ml) of rabies vaccine, when given by IM route, gets deposited in the muscle. Thereafter, the antigen is absorbed by the blood vessels and is presented to antigen-presenting cells which trigger the immune response. Whereas, while using ID route, a small amount (0.1ml) of rabies vaccine is deposited in the layers (dermis) of the skin at one or more than one site, the antigen is carried by antigen-presenting cells via the lymphatics to the regional lymph nodes and reticulo-endothelial system eliciting a prompt and protective antibody response. Immunity is dependent mainly upon the CD4 + T-cell dependent neutralizing antibody response to the G protein. Cell-mediated immunity is also an important part of the defence against rabies. Cells presenting the fragments of G protein are the targets of cytotoxic T- cells and the N protein-induced T helper cells. The immune response induced by ID administration of rabies vaccine is comparable to rabies IM route.

Passive immunity in the form of ready-made antibodies can be provided by anti-rabies serum/RIG before it is physiologically possible for the victim to produce his/her own antibodies following Anti-Rabies vaccination. This can be given to category III type of animal bite cases, and in category II cases where the patient is immune compromised or is under immune suppressive therapy.

RIG is administered only once, preferably at or as soon as possible after initiation of post-exposure vaccination. It is not indicated **beyond the seventh day** after the first dose of rabies vaccine, regardless of whether the doses were received on days 3 and 7, because an active antibody response to the rabies vaccine has already started, and this would represent wastage of

RIG. The maximum dose of HRIG is 20IU/kg of body weight, while that of ERIG is 40 IU/kg of body weight.

Rabies in Animals

In general, rabid animals of all species commonly exhibit typical signs of central nervous system disturbances with behavioural changes.

A. Rabies in Dogs:

The Incubation period of Rabies in dogs is 3-8 weeks on average but may vary from 10 days to as long as 6 months but is rarely more than 4 months. There may be hyper excitability or lethargy, pharyngeal paralysis and thus frothing of saliva, posterior paresis or paralysis, sudden coma and death. Behavioural changes are common during the early phases of the disease when the dog behaves abnormally, hides in dark corners, shows unusual agitations, becomes restless. Fever, dilatation of the pupils and photophobia are sometimes present. The furious form follows the prodromal phase, and the affected dogs may bite without any provocation. It may bite itself and inflict serious injuries. Some dogs exhibit only a paralytic stage with the characteristic dropped jaw and in-coordination. Progressive paralysis begins with the muscles of the head and neck region. The tone of bark changes due to partial paralysis of vocal cords. Convulsions are seen in the terminal phase followed by in-coordination and posterior paresis. Once the clinical signs set in, the disease progresses rapidly to the death of the animal due to respiratory failure generally within 3-8 days.

B. Rabies in Cats:

The clinical signs in cats are of a furious type and are similar to that in dogs but affected cats have a greater tendency to hide in secluded places and are more vicious than dogs. The cat might strike in the air with its forepaws as if it is catching imaginary mice. After 2-4 days of the excitation phase, the paralysis of the posterior third of the body follows.

C. Rabies in Cattle:

Livestock is a vulnerable victim of rabid carnivores and mongooses. The average incubation period of Rabies in cattle is 15 days (depends on the site of bite days) and the average morbidity period is 4 days. The major clinical signs in cattle include excessive salivation, behavioural changes, muzzle tremors, vocalization (bellowing), low-pitched voice due to paralysis of vocal cord (may mistake for heat sign), aggression, hyperesthesia and/or hyper excitability, and pharyngeal paresis/ paralysis, coma and death.

D. Rabies in Sheep and Goats:

The clinical signs in sheep include head butting, muzzle and/or head tremors, aggressiveness, Hyper-excitability, and/or hyperesthesia, trismus, salivation, drooping ears, vocalization, recumbence, and death.

E. Rabies in Horse and Mules:

The signs are similar to tetanus. The average incubation period is 12 days (depends on the site of bite) and the average morbidity period is 6 days with the majority of the horses developing furious Rabies. Muzzle tremors pharyngeal spasm or pharyngeal paresis, ataxia or paresis, lethargy or somnolence, stamping of the foot, biting and rearing of ears are the common signs manifested by rabid horses.

F. Rabies in Pigs:

The symptoms are characterized by excitement, irritation, rooting up the ground or rubbing at the surface, aggressiveness, biting of hard objects, other animals and man, paralysis and death in 2-4 days.

G. Rabies in Wild Animals:

Rabies is also reported in a wide range of wild species, such as wilds dogs, jackals, coyotes, wolves, foxes and raccoon dogs, skunks, mongooses, bats and raccoons which are the primary

hosts of Rabies Virus (RABV). Wild animals frequently lose their fear of humans, and may attack humans or animal species they would normally avoid (e.g. porcupines).

Across the world, Wild life Rabies has been documented from Africa, Continental Asia, Russian Far East, Northern China, and Korean Peninsula, Southern China and Taiwan, Israel, West Bank, Gaza Strip and Turkey, Islamic Republic of Iran, Oman, Saudi Arabia, and Yemen & Other Middle East, Asian, European countries, North America, Eastern Canadian border and USA. In India, wildlife Rabies has been reported in Bear, Hyena, Jackal, Leopard, Mongoose, Sambar Deer, Wolf, and Fox.

H. Rabies in Monkeys:

Clinical signs exhibited are similar to those in humans with hydrophobia, paralysis, anxiety. Non-human primates play a negligible role in the spread of the virus. In India, Langoor (*Semnopithecus entellus*) and Himalayan Palm Civet (*Paguma larvata*) were found positive for Rabies virus by FAT & BT.

I. Rabies in Bat:

Lyssaviruses have been detected in bats throughout the world. In some parts of the world, it is reported that Rabies can be transmitted through the exposure of bats. In India, so far there is no evidence to suggest the presence of bat transmitted Rabies. There has been one reported case of Rabies through bat in the year 1954. Since then, no bat-borne Rabies has been reported in India to date.

J. Rabies in Rodents and Rabbits:

Very few examples of RABV infection have been observed in rodents. Rodents are not primary hosts and do not play a role in the transmission or maintenance of Rabies. However, various animals such as squirrels, moles, shrews, domestic rats, mongoose may look similar to rodents.

Rabies vaccine for Animals

For Rabies vaccination in animals, inactivated virus (for companion animals and livestock), live attenuated virus (for wildlife and free-roaming dogs), or recombinant vaccines (for wildlife, cats and dogs) are used. Vaccine manufacturers should make known the characteristics of the product and undertake necessary experiments satisfying minimum requirements established at national and international levels. Before vaccines can receive relevant regulatory approval, the duration of immunity resulting from their use should be determined in vaccinated animals of the target species. Vaccines should confer protective immunity for at least 1 year (OIE Terrestrial Manual, 2018).

Rabies is a zoonotic disease which causes inflammation of the brain and is usually fatal. The only solution to prevent rabies is timely vaccination with anti-rabies vaccine. The vaccine is administered 1ml intramuscularly or subcutaneously through an area of clean, dry skin with all aseptic precautions. The vaccine is also intended for immunization against rabies by prophylactic use and also post-bite therapy.

Annual vaccination is recommended particularly in endemic areas. However, utmost care must be taken during vaccination of advanced stage of pregnancy to avoid stress. Rabies vaccine has to be stored and transported between 2-8°C. The antigenicity of the vaccine deteriorates if the temperature is not maintained in the recommended range. Avoid freezing the rabies vaccine.

Table 3: Pre-Exposure Rabies Vaccination schedule in Canine:

Vaccination Regimen	Initial Puppy Vaccination	Initial Adult Vaccination	Revaccination recommendation
Pre Exposure Prophylaxis	Administer one dose at 12 Weeks of age. If vaccination is performed earlier than 12 weeks of age, the puppy should be revaccinated at 12 weeks of age. In high-risk areas, a second dose maybe given 2-4 weeks after the first.	Administer a single dose.	Re-vaccination (Booster) at 1 year of age. Canine rabies vaccine with either a 1- or 3-years duration of Immunity are available.

(Ref: WSAVA Guidelines for the Vaccination of Dogs and Cats).

CHAPTER 4 RABIES STATUS OF THE STATE – JOURNEY FROM NEGLECTED TROPICAL DISEASE TO A PRIORITY ZOONOSES

As Rabies is a Zoonotic disease, its prevention and control largely depend on multi-sectoral collaboration wherein not only the role of Health sector is required but the role of Veterinary and Wildlife sectors is also very important.

For years Rabies remained a neglected disease but with the phasing out of Nerve Tissue Vaccine in 2006, Rabies prevention and control efforts gained momentum. Presently, with easy accessible to good quality Rabies vaccine for animals, the effort to control and prevent the disease has gained momentum among the general public and stakeholders and to make Rabies a priority Zoonosis.

Efforts to be under-taken by the various sectors:

1) Health Sector:

a. Establishment of Model Anti Rabies Clinics (**MARC**) at District Level and a regular uninterrupted supply of Anti Rabies Vaccine (**ARV**) and Anti Rabies Serum (**ARS**) up to PHC level for timely Anti Rabies PEP for all animal bite victims. Establishment of MARC in the State has been approved in the RoP 2025-26. **However, it has not yet started.**

b. To provide 24x7 free helpline for animal bite management and availability of Anti Rabies Vaccines at all the levels of health care like PHC's, CHC's, District Hospitals and Medical College.

c. Training on appropriate Animal Bite Management, Prevention and Control of Rabies, Surveillance and Inter-sectoral Coordination.

d. Strengthening Surveillance of animal bites and rabies deaths reporting.

e. Creating Awareness about rabies prevention.

f. Strengthening inter-sectoral coordination with other Stakeholders.

g. A Joint Steering Committee under the Chairmanship of Chief Secretary will be formed at the State level. Like the State Level, District Level Steering Committee chaired by Deputy Commissioner is in place in all District and meetings are being conducted regularly to strengthen inter-sectoral coordination. **(Annexure-3)**

h. The field investigations for all suspected human rabies cases to be strengthened. In order to enhance this process, Rapid Response Teams are formed in the district and state level (Table 4).

Table 4: List of Rapid Response Teams in District and State level:

Sl. No	Designation	Name	Contact No
1	**State RRT (Over all)**		
	Physician	Dr. Albert Pochury	7629847302
	Paediatrician	Dr. Prarthana Das	9348322325
	Microbiologist	Dr. Sulika Kinimi	8416097029
	Epidemiologist	Dr. Limasenla A. Lemtur	8119821218
	Veterinary Officer	Dr. Amenla Walling	9436062569
	Veterinary Consultant	Dr. Wonchibeni K. Ezung	9612926817
	Asst Commissioner Food Safety Officer	Mr. Merenlemba Ao	9862501416

	Lab Technician	Shri. Tongrili	9366836483
2	**Dimapur RRT**		
	Physician	Dr. Manwen Konyak	8413966541
	Paediatrician	Dr. SeyieRutsa	8232011535
	Epidemiologist	Dr. Molung Jamir	9612927335
	Microbiologist	Smti. Epibeni Humtsoe	8787614081
	Veterinary Officer	Dr. Michael Imchen	9436072892
	Food Safety Officer	Smti. Samlam Michiu	8729979002
	Lab Technician	Smti. Supongsangla	9862128553
3	**Kiphire RRT**		
	Physician	Dr. Moathung Odyou	8415945449
	Paediatrician	Dr. Lungkeuding Pame	8732839429
	Epidemiologist	Dr. Dheni Thonger	7005535006
	Veterinary Officer	Dr. Khumjungse	8837277621
	Lab Technician	Florence	8131810506
4	**Kohima RRT**		
	Medicine Specialist	Dr. C. Longe Peter	8808727655
	Paediatrician	Dr. Avono Sophie	9612416544
	Epidemiologist	Dr. Alhounuo Khezhie	8794891468
	Microbiologist	Mrs. Vikerheno Kera	7085189180
	Veterinary Officer	Dr. Ketholelie Mere	8798878413
	Food Safety Officer	Mr. Kezhangulie	8787658377
	Lab Technician	Mr. Melhoulo Sarah	9089189658
5	**Longleng RRT**		
	Dist Surv Officer (DSO)	Dr. Tiameren Imchen	7005224340
	Physician	Dr. Joshua Phom	6009899651
	Paediatrician	Dr. Sanuzolu Kezo	8131946204
	Epidemiologist	Dr. Imsongienla	9890962231
	Veterinary Officer	Dr. Bauan Buchem	8837486684
	MD (Pathology)IMDH MKG	Dr. H. Tsipongchem Sangtam	9862963526
	Lab Technician	Shri. Nyempong Phom	8974246117
6	**Mokokchung RRT**		
	Physician	Dr. Kilangwapang Pongen	7005470428
	Paediatrician	Dr. Imlisenba Lemtor	9436604409
	Epidemiologist	Dr. Toshimongla A. Longkumer	7721846937
	Veterinary Officer	Dr. Sanen Jamir	9612432662
	Food Safety Officer	Smti. Sukumlo Yanthan	9862667551
	Lab Technician	Smti. Imnasenla	9862369540
7	**Mon RRT**		
	Physician	Dr. Nyemnyei	8974582013
	Paediatrician	Dr. Chimang Paul	8974378405
	Epidemiologist	Dr. K. Elizabeth K	9862373525
	Veterinary Officer	Dr. Pangdun Konyak	9862613427
	Drug control Officer	Mr. Imnanangbong	8119041137
	Lab Technician	Shri. Imli	9863554980

8	**Noklak RRT**		
	MO DH-Noklak	Dr. Chongya BL	7085598192
	Physician	Dr. Leyang Lam	9366217542
	Epidemiologist	Dr. Kumkuiba	9862078993
	Veterinary Officer	Dr. Pameng Chuba	8731897096
	Lab Technician	Shri Puchiu	7085783636
9	**Peren RRT**		
	Physician	Dr. Thangmang Thomsong	9366089501
	Epidemiologist	Dr. I. Imnuksungba	9436017437
	Veterinary Officer	Dr. Namsui Thou	9366619660
	Lab Technician	Shri. Talisungba	8787435356
10	**Phek RRT**		
	Physician	Dr. Vanlalruati	7005724557
	Paediatrician	Dr. Seyiekhrietou Rutsa	8232011535
	Epidemiologist	Dr. Limatoshi	6909735280
	Veterinary Officer	Dr. Khrusato Keyho	7005020964
	FSO	Shri. Zhohu Puro	9862329204
	Lab Technician	Smti. Zavetolu Lohe	9862982690
11	**Tuensang RRT**		
	Physician	Dr. Alemba	8974007493
	Epidemiologist	Dr. John Shupao	8415840348
	Microbiologist	Dr. Mohan Sharma (Ph.D)	8721051252
	Veterinary Officer	Dr. Aojungshi	8825499137
	Food Safety Officer	Smti. Thalemla	8837377764
	Lab Technician	Shri. Chonbenthung A Mozhui	8118922347
12	**Wokha RRT**		
	Medicine Specialist	Dr. Chumdemo	9612976673
	Paediatrician	Dr. John Kent	8732820873
	Epidemiologist	Dr. Kesheli Awomi	8974664357
	Veterinary Officer	Dr. K.N. Zubemo Humtsoe	8974695433
	Food Safety Officer	Lipvuthung Ezung	9436407881
	Lab Technician	Lochumbeni Murry	7005246214
13	**Zunheboto RRT**		
	Physician	Dr. K. Akaho Sema	9862689920
	Epidemiologist	Dr. C. Zhekheli Chishi	8415068782
	Veterinary Officer	Dr. Marlan Sumi	9856232517
	Microbiologist	Smti. Narorenla	8730972950
	Food Safety Officer	Smti. SukumloYanthan	9862667551
	Lab Technician	Shri. Yanbemo Khuvung	8119052272

Table 5: Health facilities in the State:

Type of Health facility	Total no. of health facilities in the State	Total no. of health facilities providing hand washing facility	No. of health facilities having ARV	No. of health facilities receiving ARS
DH	12	12	12	12
CHC	23	23	23	23
PHC/UPHC	134	134	134	134

Vaccine procurement

The procurement of Anti Rabies vaccine and Anti Rabies Serum (ARS)/Rabies Immunoglobulin (RIG) for the state is carried out through NHM under the National Rabies Control Program (NRCP).

As per need, Notice Inviting Tender (NIT) is floated and the Vendor quoting the least amount is selected for supply of ARV.

Trainings & Awareness Campaign conducted

Under NRCP, the State has conducted trainings for Health-care workers on Dog bite &Rabies case Management in state and district levels.

Category of HCW	2023-24	2024-25	2025-26
MO	138	322	234
CHO	280	120	294
Nurses	317	572	556

2) Veterinary Sector:

Integration and Strengthening of Reporting Systems

a. Strengthening inter-sectoral coordination with other Stakeholders.
b. SOPs will be developed for exchange of information and data sharing among the Health, Animal Husbandry, Municipality and Forest Departments.
c. Reporting by private veterinary practitioners regarding dog bites and other animal bites cases will be made mandatory. Private practitioners will report to IDSP in a prescribed format monthly.
d. Helpline services to be developed for reporting animal bites.
e. Mandatory to report animal bite cases (Dog to Dog, Dog to Livestock, Dog to other Animals) in all govt. veterinary dispensaries/veterinary college.
f. Any dog bite case, cases suspected of rabies and death of animal species such as Cattle, Dog, Cat, Goat, Sheep, with history of rabies-like symptoms should be shared with rabies counterparts for further follow-up *e.*g. Ring vaccination, PEP, etc.
g. The Nodal officer should disseminate the reports to all the stakeholders once a month so that action can be initiated at the earliest.

Efforts undertaken in Wildlife Sector:

National Tiger Conservation Authority (NTCA)of India, under the Ministry of Environment, Forest and Climate Change, on December 2020, published a Standard Operating Procedure (SOP) to deal with emergencies arising due to stray & feral dogs in tiger reserves.

Existing provision

Under, 'The Prevention & Control of Infectious and Contagious Diseases in Animals Act, 2009', animal Rabies is already a notifiable disease in India and every State Governments has legal power to take steps to prevent and control the disease.

CHAPTER 5 STATE LEGISLATION AND PUBLIC HEALTH LAWS

Existing State Provision

The Govt. of Nagaland on 30th March, 2022 issued a notification declaring Rabies as a notifiable disease in the State **(Annexure I)**.

There are many important legislations, Public Health laws and provisions that are relevant to control and finally the elimination of Rabies. These legislations are implemented by different stakeholders. Some of the important legislations are as follows:

The Prevention & Control of Infectious and Contagious Diseases in Animals Act, 2009(14):

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 1, Control of scheduled diseases, at no. 4 of 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).*

The Protection of Human Rights Act, 1993

In terms of Section 2 of the Protection of Human Rights Act, 1993 (hereafter referred to as 'the Act'), "human rights" means the rights relating to life, liberty, equality and dignity of the individual guaranteed under the Constitution or embodied in the International Covenants and enforceable by courts in India. "International Covenants" means the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights adopted by the General Assembly of the United Nations on the 16th December, 1966.

(Source-https://nhrc.nic.in/faqs/how-are-human-rights-defined-protection-human-rights-act-1993)

Municipality Act

(**Note-**This act may vary among different civic bodies)

E.g. under the Delhi Municipal Corporation Act, 1957,

Chapter I, 3991a, 1b, 1c, 1d states "Registration and control of dog"

Chapter 1, 399(2)-The Commissioner may

(1) cause to be destroyed, or to be confined for such period as he may direct, any dog or other animal which is, or is, reasonably suspected to be, suffering from Rabies, or which has been bitten by any dog or other animal suffering or suspected to be suffering from Rabies.

(2) by public notice direct that, after such date as may be specified in the notice, dogs which are without collars or without marks distinguishing them as private property and are found straying on the streets or beyond the enclosures of the houses of their owners, if any, may be destroyed and cause them to be destroyed accordingly.

(3) No damages shall be payable in respect of any dog or other animal destroyed or otherwise disposed of under this section.
(4) No one, being the owner or person in charge of any dog, shall allow it to be at large in any public street or public place without being muzzled and without being secured by a chain lead in any case in which:
(a) he knows that the dog is likely to annoy or intimidate any person, or
(b) the Commissioner has, by public notice during the prevalence of Rabies, directed that dog shall not be at large without muzzles and chain leads.
(5) No one shall:
(a) allow any ferocious dog which belong to him or is in his charge to be at large without being muzzled, or
(b) set on or urge any dog or other animal to attack, worry or intimidate any person; or
(c) knowing or having reason to believe that any dog or animal belonging to him or in his charge has been bitten by an animal suffering or reasonably suspected to be suffering from Rabies, fail or neglect to give immediate information of the fact to the Commissioner or give information which is false.

The Epidemic Disease Act, 1897, The Act No. 3 of 1897

Purpose: An Act to provide for the better prevention of the spread of dangerous Epidemic Diseases.

'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: Act to provide for public liability insurance to provide immediate relief to the persons affected by accident occurring while handling any hazardous substance and for matters connected therewith or incidental thereto17.

The Clinical Establishments (Registration and Regulation) Act, 2010

Purpose: This 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 this 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.

Role of Legislation in the fight against Rabies

The State Govt. has a big role to play in the fight against Rabies by passing 'Legislation' in the State Assembly pertaining to Rabies control. Legislation will emphasize on the following heads:

i. Declaring "Rabies" as Zoonosis which is still prevalent in India.
ii. Declaring "Rabies" as a "Notifiable Disease" as per the Prevention and Control of Infectious and Contagious Diseases in Animals Act – 2009.
iii. Building a bridge between A.H &Veterinary Department, H & FW Department and lead organizations dealing with Rabies control by framing a common platform.

iv. Declaring that "Registration, Vaccination & Animal birth control (ABC) of Dogs" is a compulsory law (Legal Aspect) – failure of which will attract a penalty and/or even jail to pet owners.
v. Making 'Intensified Awareness Programme on Rabies, Mass Rabies Vaccination Programme & Animal Birth Control (ABC) – as three key components in Rabies control (Critical component) –Mandatory for all Districts to achieve the targets.
vi. All pet Breeding shops dealing in supplying, breeding & importing of pets/exotic pets from outside the state should register with competent Authorities and comply with Rabies control rules.
vii. Municipal Bodies in the state to strengthened their Veterinary Wings and be proactive in Registration, Animal Birth Control & Rabies Control as per Section 304, Chapter XVI and Section 325, Chapter XVIII of Indian M.C. Act-2000.
viii. Provision of Funding on Rabies control.

Reporting and Notification

Once the Law is passed by State Legislature, Reporting and Notification of Rabies outbreak, Rabies positive cases, Rabies affected species, affected villages/places etc., will be made compulsory to the Authority by the Veterinarians & Medicos through proper channels. Then after, the concerned Authority will report and notify the same to the Government (State & Central) after authentication for public interest. The Municipal Bodies will play a big role in reporting of the same as per Section 280, Chapter XV and Section 285, Chapter XV of Indian M.C. Act-2000.

Factors important in deciding whether a disease is Notifiable

The following factors may be considered:

1. Rabies is infectious, contagious, and highly fatal disease (Etiology).
2. Rabies is highly contagious through bites from both domestic & wild carnivores whether in Rural or Urban areas (Transmission).
3. Rabies is a Zoonotic disease (Zoo-Anthro-Zoonoses) (Public Health Concern).
4. Causes high fatality rate in both Animals and humans. (High Mortality).
5. Transboundary disease (Difficult to control).
6. Incur loss in prophylaxis and treatment (Economic loss).

How the legislature will support Rabies control, elaborate and implement?

The law on Rabies control passed by State Legislature will provide the Veterinarians, Medical professionals, Municipal bodies & Administrative personnels a provision to implement the Rabies control with full legality as per the Prevention and control of Infectious and Contagious Disease Animals Act, 2009.

Laws and by–laws useful in ensuring successful Dog Rabies Control Programme

To ensure a successful Rabies control Programme, a provision under the law on Rabies control passed by State Legislative will pass different laws and by-laws such as:

1. Compulsory Registration, Rabies Vaccination & Animal Birth Control of Pets dogs/owned dogs with the concerned Authorities as per A.W.B.I Rules & Indian M.C Act-2000.

2. Garbage control, Sewage disposal, disposal of dead animals, & Registration and Control/Seizing cum Rabies Vaccination of stray dogs by Municipal Bodies (Proactive) as per Indian Municipal Corporations Act, 2000. (Section 186 of Chapter XII, Section 301 of Chapter XV, Section 304 of Chapter XVI, and Section 325 of Chapter XVIII).

3. Compulsory Pre-exposure vaccination against Rabies for Health workers, Public Health workers, Wildlife Workers, Pet handlers, Animal Health workers, Municipal personnel dealing in Restraining stray dogs/animals.

4. Compulsory Awareness Programme on Rabies to School children, Public (Health Education), Syllabus on Awareness in Rabies in School & Colleges.

5. Regular Mass Dog Vaccination (MDV) Programme in Urban Areas (Municipal), Market Areas to target the stray dog population and in areas with high density of dog population in order to achieve more rabies vaccination coverage.

CHAPTER 6 ONE HEALTH APPROACH FOR RABIES ELIMINATION

The One Health approach is a comprehensive and interdisciplinary strategy that recognizes the interconnection between human health, animal health, and the environment. When applied to human rabies elimination, the One Health approach emphasizes the collaboration and coordination of various sectors, including public health, veterinary medicine, and wildlife management. This approach recognizes that rabies is a Zoonotic disease, primarily transmitted through the bites of infected animals, particularly dogs, and poses a significant threat to human health.

By addressing the disease at its source and considering the complex interactions between humans, animals, and the environment, the One Health approach aims to prevent and control human rabies through interventions such as awareness generation, mass dog vaccination campaigns, responsible pet ownership education, surveillance and monitoring of rabies cases, and improved healthcare infrastructure for prompt and effective treatment. This integrated approach is essential for achieving sustainable and long-term success in eliminating human rabies, protecting communities, and preserving the health and well-being of both humans and animals.

Effective communication plan

An effective communication plan is crucial in implementing a One Health approach to eliminate dog mediated rabies and fostering collaboration among the health sector, veterinary sector, and municipal sector and enhances the collective efforts to eradicate rabies and protect both human and animal health. Here are some reasons why an effective communication plan is important:

1. **Raising awareness:** A communication plan helps raise awareness about dog-mediate rabies, its risks, prevention methods, and the importance of collaboration among different sectors. By disseminating information through various channels, such as public service announcements, social media, workshops, and community engagement, people become informed about the disease and the actions needed to eliminate it.
2. **Behavioural change:** Rabies prevention relies on changing human behaviour, such as responsible dog ownership, vaccination, and reporting of dog bites. An effective communication plan can educate individuals and communities about these behavioural changes, emphasizing the benefits of responsible dog ownership and timely vaccination. It can also address common misconceptions and myths surrounding rabies, leading to behaviour change and improved compliance with preventive measures.
3. **Stakeholders engagement:** The One Health approach requires collaboration and coordination among various stakeholders, including the health sector, veterinary sector, and municipal sector. A communication plan helps engage these stakeholders by providing clear and consistent messaging, facilitating dialogue, and establishing platforms for sharing information and resources. It ensures that all sectors are aligned and working towards a common goal, leveraging their unique expertise and resources.
4. **Trust-building:** Effective communication builds trust among the public, stakeholders, and sectors involved. By providing accurate and timely information, addressing concerns, and promoting transparency, the communication plan fosters trust in the efforts being made to eliminate dog-mediated rabies. This trust is essential for the success of vaccination campaigns, reporting of dog bites, and community participation.
5. **Sustained engagement:** Rabies elimination requires sustained efforts over time. A communication plan helps maintain engagement and momentum by keeping the public informed about progress, challenges, and future plans. It provides regular updates,

celebrates achievements, and seeks community feedback. Continuous communication ensures that people remain invested in the cause, leading to long-term commitment and support.

6. **Effective resource utilization:** An efficient communication plan optimizes the use of available resources. By targeting specific audiences, tailoring messages, and selecting appropriate channels, it maximizes the impact of communication activities. This helps in reaching a wide range of individuals and communities, even in resource-constrained settings, and ensures that resources are utilized effectively for the greatest benefit.

Developing a communication plan

Developing a communication plan on rabies elimination that involves the health sector, veterinary sector, and municipal sector is vital for fostering collaboration, aligning efforts, and maximizing the impact of the collective actions taken by these sectors. Here are the key steps involved in developing such a communication plan:

1. **Stakeholder identification:** Identify key stakeholders within the Health sector, Veterinary sector, and Municipal sector and the local Bodies who will play a role in rabies elimination efforts. This includes representatives from public health departments, veterinary associations, animal control agencies, healthcare providers, local government authorities, and community organizations.
2. **Goal setting:** Establish clear and measurable goals for the communication plan. These goals should align with the overall objectives of rabies elimination, such as increasing vaccination coverage, promoting responsible pet ownership, enhancing reporting mechanisms for dog bites, and raising awareness about the importance of timely treatment.
3. **Audience analysis:** Conduct an audience analysis to understand the characteristics, needs, and communication preferences of different target groups. This includes identifying at-risk communities, healthcare professionals, pet owners, local authorities, and the general public. Tailor the communication strategies and messages to effectively reach and engage these specific audiences.
4. **Message development:** Craft key messages that are accurate, clear, and resonate with the target audiences. Emphasize the importance of collaboration among the health sector, veterinary sector, and municipal sector in eliminating rabies. Highlight the benefits of responsible dog ownership, the significance of vaccination, the protocol for reporting and treating dog bites, and the role of each sector in rabies prevention and control.
5. **Communication channels and tools:** Determine the most appropriate communication channels and tools to reach the target audiences. This may include a combination of traditional media (TV, radio, print), digital platforms (websites, social media), community events, educational materials, and training workshops. Consider the accessibility and reach of each channel to ensure maximum engagement.
6. **Collaboration and coordination:** Establish mechanisms for collaboration and coordination among the health sector, veterinary sector, and municipal sector in implementing the communication plan. This may involve regular meetings, joint training sessions, shared resources, and a centralized platform for information sharing and updates. Encourage open communication and feedback loops among the sectors to address challenges and adapt strategies as needed.
7. **Monitoring and evaluation:** Implement a system for monitoring and evaluating the effectiveness of the communication plan. Track key performance indicators, such as changes in vaccination rates, increased reporting of dog bites, and public awareness

levels. Gather feedback from stakeholders and the public to assess the impact of communication activities and identify areas for improvement.

8. **Continuous improvement:** Continuously assess and improve the communication plan based on monitoring and evaluation results, feedback from stakeholders, and emerging needs and challenges. Adapt strategies, messages, and channels as necessary to ensure the plan remains effective and aligned with the evolving context of rabies elimination efforts.

By developing a comprehensive communication plan that involves the health sector, veterinary sector, and municipal sector, the collaborative efforts to eliminate rabies can be enhanced. Effective communication will raise awareness, encourage behaviour change, promote responsible pet ownership, and strengthen reporting and treatment mechanisms, leading to the successful prevention and control of rabies while safeguarding the health and well-being of both humans and animals.

CHAPTER 7 STAKEHOLDERS INVOLVED IN SAPRE

The prevention, control and elimination of Rabies require an effective and concerted effort from all stakeholders. The stakeholders involved in the operationalization of SAPRE have been categorised as Key Stakeholders, Supporting Stakeholders and Others.

Key Stakeholders:

Key stakeholders will act as a nodal agency for the overall formulation, planning, coordination and implementation of the activities as envisaged under the State Action Plan of Rabies Elimination. They will be directly involved in providing technical and logistic support to the State, District and below level.

The key stakeholders identified are as under:

1. Health & Family Welfare Department at the State and District level.
2. Animal Husbandry & Veterinary Department at the State and District level.
3. Department of Forest, Environment & Climate change at the State level and similar Forest authorities at National Park& notified zone.
4. State Urban/Municipal Affairs Department.
5. State Community & Rural Development Block.
6. Rural Local Governing Bodies (LGB) at Village level.

Supporting Stakeholders:

Supporting stakeholders are those who would be assisting the key stakeholders in the coordination & implementation of various aspects of the SAPRE. They will provide technical Assistance in activities planned for Rabies Elimination from the State under various components. The supporting stakeholders identified are as under:

1. Department of Finance at State and respectively at district level.
2. Department of Planning & Transformation.
3. Department of Information and Public Relations at State and below State level.

Other Stakeholders:

These stakeholders would primarily assist in the implementation of technical aspects of the SAPRE with the available logistics and expertise available to them and providing support to the key stakeholders at the field level. Private partners fall into the following categories.

1. Non-Government organization active in the field of Rabies in Health and Veterinary sectors.
2. Professional organizations and associations in the medical and veterinary sector.
3. International Development organization and UN agencies.
4. Private hospitals, institutions, clinic, diagnostic labs both in the veterinary and health sectors.

Responsibilities of Agencies in Rabies Control program

A. Role of Health Department:

The Health Department plays a critical role in the prevention and control of human Rabies. Here are some key roles and responsibilities of the Health Department in combating this disease:

1. **Surveillance and reporting:** The Health Department is responsible for establishing and maintaining a surveillance system to monitor the occurrence of human rabies cases. This includes collecting and analyzing data on suspected and confirmed cases (Clinical/

Laboratory), conducting investigations, and ensuring timely reporting to relevant authorities. Surveillance helps identify areas of high incidence, detect outbreaks, and guide targeted interventions.

2. **Public awareness and education:** The Health Department plays a vital role in raising public awareness about rabies prevention and control. It develops and implements educational campaigns to inform the public about the risks associated with rabies, the importance of timely medical care after a potential exposure, responsible pet ownership, and the benefits of vaccinating domestic animals. These efforts aim to promote behaviour change and reduce the incidence of human rabies cases.
3. **Post-exposure prophylaxis (PEP):** The Health Department ensures access to appropriate post-exposure prophylaxis (PEP) for individuals who have been bitten by or exposed to a potentially rabid animal. This includes providing guidelines and protocols for healthcare professionals to follow in assessing and managing cases of animal bites, administering PEP, and monitoring patients for any signs of rabies. The department also collaborates with healthcare facilities to ensure the availability of Rabies vaccines and Immuno-globulins.
4. **Healthcare provider training:** The Health Department conducts training programs for healthcare providers on the diagnosis, management, and reporting of rabies cases. These programs aim to improve the capacity of healthcare professionals to recognize and respond to potential rabies cases promptly. Training also focuses on the appropriate use of PEP and the proper handling and transportation of samples for laboratory testing.
5. **Collaboration and coordination:** The Health Department collaborates with other sectors, such as the Veterinary department, animal control agencies, and local government authorities, to implement a OneHealth approach to rabies prevention and control. This involves regular coordination meetings, information sharing, joint outbreak investigation, joint planning and implementation of activities, and leveraging each sector's expertise and resources.
6. **Policy development and implementation:** The Health Department develops and enforces policies and regulations related to rabies prevention and control. This includes guidelines on animal vaccination, responsible pet ownership, reporting and management of animal bites, laboratory testing procedures and the handling of rabies cases. The department ensures that these policies are effectively communicated, understood, and implemented at all levels of the healthcare system.
7. **Monitoring and evaluation:** The Health Department monitors and evaluates the effectiveness of Rabies prevention and control programs. This involves assessing the coverage and impact of vaccination campaigns, tracking the incidence of human rabies cases, evaluating the availability and accessibility of PEP, and analyzing surveillance data to identify gaps and areas for improvement. Monitoring and evaluation help inform evidence-based decision-making and guide strategic interventions.

By assuming these roles and responsibilities, the Health Department plays a crucial part in preventing and controlling human rabies. Its efforts in surveillance, public awareness, vaccination campaigns, PEP administration, healthcare provider training, collaboration, policy development, and monitoring contribute to reducing the incidence of rabies and protecting the health and well-being of communities.

B. Role of Veterinary Sector:

The program in the States will be implemented through the State Veterinary Department, Municipalities and Block Institutions. In this SAP, the role envisaged for the animal sector is as follows:

1. Advocacy with different stakeholders for prioritizing animal Rabies to achieve commitment at all levels so that resources could be mobilized for the elimination of Rabies.
2. Mapping of high risk, medium risk and low risk areas of Rabies in association with health department and other stakeholders to prioritizing areas for MDV and DPM.
3. Ensure uninterrupted supply of logistics manpower and material for undertaking mass vaccination and ring vaccinations activities for the areas targeted for Rabies elimination.
4. Capacity building for Veterinary Professional, Para vets, dog catchers, post-vaccination survey staff and other allied personnel.
5. Strengthening of Rabies diagnostic laboratories from the veterinary sector.
6. To develop standard IEC materials for wider circulation.
7. Inter-sectoral coordination and sharing of information on Rabies with the health and wild life health sector to facilitate better implementation.
8. To be part of joint investigations whenever there are human Rabies cases or increasing dog bite cases.
9. Liaise with different stakeholders and agencies for technical support on rabies prevention and control.
10. Monitor and evaluate the control programs implemented by the field units.
11. Establishment/strengthening of check-post/quarantine centres since unvaccinated as well as diseased animals can easily enter and introduce Rabies in areas where Rabies cases have reduced.
12. To coordinate with the stakeholders involved in strategic Dog Population Management (DPM).
13. Since, Veterinary Council of India is responsible for making provisions for the regulation of veterinary practice and standards of veterinary education, animal Rabies will be included as a priority disease in the curriculum of Para-veterinary students.
14. Increase the involvement of internees in activities of MDV and MDPM during their routine.

C. Role of Wild Life Sector:

Most of the forests are surrounded by villages and rural dwellings. This increases the risks of transmission at the Domestic-wild life interface hence collaboration between livestock and wildlife sectors (forestry) is equally important. In this NAP, the roles envisaged are as follows:

1. Frame technical guidelines and monitoring framework for wild life Rabies.
   Identify animal Rabies endemic areas near National parks/conservation areas and forests.
2. Undertake surveys in wild life reservoirs in captured and free-roaming wild animals.
3. Capacity building of zoo personnel to handle wild life Rabies cases.
4. Ensure pre-exposure prophylaxis for Rabies zoo's personnel, wildlife workers and animal handlers.
5. Ensure pre-exposure prophylaxis Rabies vaccinations for zoo animals.
6. Disseminate IEC for zoo and animal handlers/ zoo workers/ visitors.
7. Sharing of Rabies disease outbreak information among wild animals to DAHD and Health sector.
8. To undertake research on wildlife sentinels, transmission patterns, and spillovers of Rabies virus from wild animals to domestic animals.
9. To undertake Active surveillance to identify the wildlife reservoirs for the Lyssa virus.
10. To undertake a risk assessment in areas adjoining the Forests, Sanctuaries, and National parks.

11. Predator-proof sheds for livestock should be made compulsory for those families who live near the WPA/Forest/Sanctuary to ensure no spillovers.
12. Pre-exposure Rabies vaccination protocols should be done routinely for dogs and livestock living around Wildlife Protected Area (WPA)/Forest/Sanctuary.
13. To undertake Proper disposal of animal carcasses near the WPA/Forest/Sanctuary.
14. Collection of surveillance samples from wild animals in cases of suspected Rabies deaths.
15. Implementation of three-four layered agro-forestry plantations should be adopted for the prevention of wildlife-domesticated animal conflict in the fringe area of villages and the fallow area near the WPA/Forest/Sanctuary.
16. The Wildlife Sanctuaries / National Parks marked for the conservation of wild cats by NTCA, to consider the control of stray dog population and Anti Rabies Vaccination clubbed with other Mass Vaccination campaigns for Distemper & Parvo Virus.

D. Role of Urban and Rural Local Governing Bodies (LGB):

(Municipal Corporation, Zilla Parishad, gram panchayat)

As per the Panchayat Raj Act and Municipality Act, the local self-government, councils, and corporations are in charge of implementing the ABC programmes. The acts are to be implemented as per the guidelines (for stray dog vaccinations, and dog population management). The activities envisaged for LGB are:

1. Advocacy, training, and capacity building of Panchayati Raj Institutions (PRI) members on prevention and control of rabies in their village/ward.
2. Gram Sabha to be convened immediately to inform the public regarding the incidence of rabies and the need for various mitigation measures and legislation.
3. Members can immediately report to the animal husbandry and health departments when an unusual incidence of dog bite or a potential rabies case in their respective ward/village is noted.
4. Members can ensure that human bite victim (exposed) gets proper (full dose) medical treatment.
5. Provide a list of patients exposed to animal bites and the same be maintained in the respective ward/village and follow up measures to be done strictly.
6. Monitor and strictly implement mass vaccination campaign of dogs in their respective ward/villages.
7. Encourage pet dog registration in their wards/constituencies/villages.
8. Resolution can be passed in Gram Sabha regarding restriction of movement of dogs in their respective ward and complete ban on importation/introduction of new dogs.
9. Monitor pet owners and encourage them to register and vaccinate their pets.
10. Monitor MDV and DPM plans undertaken by the concerned agency.
11. Coordination with health and veterinary sectors for strategic mass vaccination of stray dogs.
12. 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.
13. Information sharing on animal bites and rabies cases to the local animal husbandry department, health department, and local authority.
14. 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 programme as per the ABC (Dogs) Rules, 2001.

15. 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 the units.
16. To collect waste from vegetable, fruit, flower, meat, poultry, and fish markets 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 in the vicinity of markets to ensure hygienic conditions to accumulation of waste which would attract dogs (Free-Roaming Dogs (FRDs) and community owned dogs).
17. Special focus on preventing the disposal of animal carcasses in and around peripheral areas of villages, towns, cities, and around forest areas so as to avoid easy availability of food for FRDs and scavenging wild animals and further prevent the interactions between wildlife and domestic animals.

E. Role of Animal Welfare Board of India:

1. To ensure implementation of Prevention of Cruelty to Animal Act, 1960 in coordination with the state government and local bodies.
2. To work with the State veterinary department, and coordinate with the local governing bodies for developing a strategic DPM plan as per the ABC Rule.
3. Services and assistance of Animal Welfare Organizations can be utilized with respect to certain aspects of DPM and MDV drives; & isolation and observation of aggressive dogs suspected with Rabies etc.
4. The services of AWOs will be utilized constructively for prevention and control of rabies in their jurisdiction area wherever possible. Local governments can take assistance from AWOs in social immobilization, community awareness and rescue operations for undertaking the MDV & DPM.

F. 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 sectors.

The key roles identified are as under:

1. Develop a strong volunteer network for community engagement & mobilization.
2. Promotion of Anti Rabies vaccination campaigns.
3. Promote responsible pet ownership.
4. Intensify Rabies awareness education and interpersonal communication campaign.
5. Surveillance/reporting of suspected animal Rabies cases.
6. Ensure animal bite management in animals.

Table 6: List of District Surveillance Officers (DSO), Nagaland as on September 2025.

Sl no.	Name of District	Name of DSO	Contact No.
1	Dimapur	Dr. Kavito Zhimomi	9436007825
2	Kiphire	Dr. Martha Mpon	9402204492
3	Kohima	Dr. Kevi Meyase	7085230101
4	Longleng	-	-
5	Mokokchung	Dr. Martula Lemtur	8575231164
6	Mon	Dr. Abenthung Murry	8132813232
7	Noklak	Dr. Victor	9366044267

8	Peren	-	-
9	Phek	Dr. Rebecca Zhimomi	7005361004
10	Tuensang	Dr. Ayangla Saku	8413934431
11	Wokha	-	-
12	Zunheboto	Dr. Esther Kath	9615063770

Table 7: List of Veterinary District Surveillance Officers, Nagaland

State Surveillance Officer (overall)		
Dr. Amenla Walling	9612815298	dirahvsngl@gmail.com

Sl no.	Name of District	Name of DVO	Contact No.	Email ID
1	Dimapur	Dr. Eyekhweshe Kapfo	9436015840	cvodima@gmail.com
2	Kiphire	Dr. Tselise Sangtam	9862515680	cvokiphire@gmail.com
3	Kohima	Dr. Wopanthung Ezung	9612401433	cvo_kohima@yahoo.com
4	Longleng	Dr. Imsuyanger Longkumer	9436003326	cvolongleng@gmail.com
5	Mokokchung	Dr. Tiachuba Jamir	9436439704	cvomkg18@gmail,com
6	Mon	Dr. Gloria Ngullie	9435342571	cvomon18@gmail.com
7	Noklak	Dr. H. Pamingchuba	9383025851	cvonoklak@gmail.com
8	Peren	Dr. Namsui Thou	8415092640	cvoperen@gmail.com
9	Phek	Dr. Esther Krocha	9612807792	cvophek18@gmail.com
10	Tuensang	Dr. Tekasangba Jamir	9436602933	cvophek18@gmail.com
11	Wokha	Dr. K.N Zubemo Humtsoe	8974695433	cvophek18@gmail.com
12	Zunheboto	Dr. Marlan Sema	9856232517	cvophek18@gmail.com
13	Chumukedima	Dr. Imlimenla Imchen	9436007607	cvochumukedima24@gmail.com
14	Niuland	Dr. Hokato K. Yeptho	9862838800	cvoniuland@gmail.com
15	Shamator	Dr. H. Pamingchuba	9383025851	cvoshamator@yahoo.com
16	Tseminyu	Dr. Kenalo Kath	7628970849	cvotseminyu@gmail.com

Table 8: List of Wildlife or Forestry officials:

In the State of Nagaland, there are 2(Two) Wildlife Divisions with respective in charge as reflected in the Table.

Sl no.	Name of District	Name of officer	Contact No.	Districts covered
1	**Dimapur**	Tokaho Kinimi IFS Wildlife Warden, Dimapur Wildlife Division.	**8731821345**	Dimapur, Chumoukedima, Niuland, Peren, Kohima, Tseminyu, Zunheboto, Wokha, Mokokchung
2	**Kiphire**	Siechutho Katiry, SFS, Wildlife Warden, Kiphire Wildlife Division.	**700552981**	Kiphire, Phek, Tuensang, Mon, Noklak, Longleng, Shamator, Meluri

GOVERNMENT OF NAGALAND
OFFICE OF THE CHIEF WILDLIFE WARDEN
DEPARTMENT OF ENVIRONMENT, FORESTS & CLIMATE CHANGE
NAGALAND: DIMAPUR
Email: nagacwlw@yahoo.co.in

No. CWL/GEN/178 (Part-V)/472 Dated Dimapur, the 23rd September, 2025

To
The Principal Director
Directorate of Health & Family Welfare
Nagaland, Kohima

SUB: REQUEST FOR NOMINATION OF FOREST OFFICERS FOR STATE ACTION PLAN FOR DOG MEDIATED RABIES ELIMINATION (SAPRE)

Ref: Your letter No. DHFW-10/NRCP.Corrs/2015-16/65 dated 23/09/2025

Sir,

With reference to the subject cited above, I am to inform you that the Nodal Officers will be the Wildlife Warden, having jurisdiction over the districts.

Sl. No.	Wildlife Warden, Wildlife Division, Dimapur	Contact No.	Email. Id.
1	Dimapur, Kohima, Chumuokedima, Nuiland, Wokha, Peren, Tseminyu, Zunheboto and Mokokchung	8731821345	wildlifewardendmp@gmail.com
	Wildlife Warden, Wildlife Kiphire	7005522981	kiphire.wlw@gmail.com
1	Phek, Kiphire, Mon, Tuensang, Longleng, Samatore, Meluri and Noklak		

This is for your information and necessary action.

Enclo: As Stated Above

Yours faithfully,

(Vedpal Singh, IFS)
Chief Wildlife Warden
Nagaland, Dimapur

No. CWL/GEN/178 (Part-V)/473 -74 Dated Dimapur, the 23rd September, 2025

Copy to:

1. The Principal Chief Conservator of Forest &Head of Forest Force, Nagaland, Kohima for kind information.
2. The Wildlife Warden, Wildlife Division, Dimapur / Kiphire for information and necessary action.

Chief Wildlife Warden
Nagaland, Dimapur

3RD FLOOR, FOREST OFFICE COMPLEX, FOREST COLONY, DIMAPUR – 797112, NAGALAND, INDIA

CHAPTER 8 SURVEILLANCE OF RABIES UNDER THE SAPRE

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.

To combat the disease burden, 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 components:

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 & Inter-sectoral coordination
9. Infrastructure and logistics
10. Information, Education and Communication

Joint Outbreak Investigation

A joint outbreak investigation involving the Veterinary Department, Health Department, and Municipal Department is a crucial step in addressing a case of human rabies. Such collaboration ensures a comprehensive and coordinated response to identify the source of the outbreak, prevent further transmission, and implement effective control measures. Here's an overview of the key aspects involved in a joint outbreak investigation:

1. **Case identification and confirmation:** The Health Department identifies and confirms the case of human rabies through clinical evaluation, laboratory testing, and medical history analysis. Once a case is confirmed, it triggers the need for a thorough investigation to understand the extent and potential sources of the outbreak.
2. **Epidemiological assessment:** The Health Department, in collaboration with the Veterinary Department, conducts an epidemiological assessment to gather information about the affected individual, including their exposure history, contact with animals, and travel patterns. This assessment helps in identifying potential sources of infection and determining the scope of the outbreak.
3. **Animal contact investigation:** The Veterinary Department plays a crucial role in investigating animal contacts associated with the confirmed case. This includes tracing and examining animals, particularly dogs that may have transmitted the rabies virus. The Veterinary Department may perform animal testing, such as post-mortem examinations or laboratory analysis of animal samples, to confirm rabies infection.
4. **Environmental assessment:** The Municipal Department is responsible for conducting an environmental assessment to identify areas or factors that may contribute to the spread of rabies. This includes assessing the presence of stray animals, animal shelters, waste management practices, and other environmental factors that could increase the risk of exposure to rabid animals.

5. **Collaborative data analysis:** The Veterinary Department, Health Department, and Municipal Department jointly analyse the data collected during the investigation. This analysis includes mapping and identifying patterns of human and animal rabies cases, determining the source and routes of transmission, and identifying potential risk factors contributing to the outbreak.
6. **Control measures implementation:** Based on the findings of the investigation, the three departments collaborate to implement appropriate control measures. This may include targeted vaccination campaigns for domestic animals, particularly dogs, in the affected areas to interrupt the transmission cycle. Other measures may involve public awareness campaigns, enforcement of responsible pet ownership practices, enhanced surveillance, and collaboration with relevant stakeholders to address specific risk factors identified during the investigation.
7. **Communication and coordination:** Effective communication and coordination among the three departments are essential throughout the outbreak investigation. This ensures that information is shared in a timely manner in a common data sharing platform, decisions are coordinated, and control measures are implemented consistently. Regular meetings, joint action plans, and information-sharing mechanisms help maintain alignment and streamline efforts.
8. **Monitoring and evaluation:** The three departments continue to monitor the progress and effectiveness of the control measures. This includes assessing the impact of vaccination campaigns, tracking human and animal rabies cases, evaluating the implementation of responsible pet ownership practices, and adjusting strategies as needed. Monitoring and evaluation provide valuable insights for future outbreak preparedness and response.

By conducting a joint outbreak investigation, the Veterinary Department, Health Department, and Municipal Department combine their expertise and resources to address human rabies outbreaks comprehensively. This collaborative approach strengthens the control measures implemented, enhances communication and coordination, and ultimately contributes to the containment and prevention of rabies transmission, protecting both human and animal health within the affected area.

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 & reporting of every case of Animal bite victim and Rabies cases occurring in the community is an essential step for maintaining the surveillance.

In the state, the Integrated Disease Surveillance Program (IDSP)-Integrated Health Information Platform (IHIP) is an existing platform within the Health Department that plays a crucial role in reporting dog bite cases and facilitating timely interventions. The IDSP-IHIP serves as a centralized system for reporting and monitoring dog bite cases, ensuring prompt action and effective coordination among various healthcare facilities and personnel. Three kinds of forms are used for reporting: The **S form**, **P form** and **L form**. The healthcare staff members, using their login credentials, can enter the information from the community-reported cases into the IHIP application or portal. A joint outbreak investigation team will be carried out for any rabies control activities in areas identified as high-risk.

Format for Human Rabies Notification: **Annexure-2**

Cross cutting issues - Health Department

1. Establish an inter-sectoral Rabies task force, committee, or working group, including all relevant stakeholders at a local or State level, and define their meeting intervals.
2. Establishing joint steering committee and district level committee for Rabies elimination.
3. Establish a monitoring and evaluation framework to track the progress of the elimination plan in the state.
4. Conduct impact assessments to measure the reduction in human and animal rabies cases.
5. Drafting SOP for Rabies reporting and outbreak response.
6. Training at different levels for Rabies elimination.
7. The department will develop mechanism for mobilizing emergency funds for rabies control from Central scheme like ASCAD, State government funds, private corporates, international bodies, donors and philanthropists

Surveillance of Animal Health Component on SAPRE

The surveillance programme for the animal health component (domestic/wildlife animal) includes Laboratory and Serological Surveillance as per the standard guidelines by the Department of Animal Husbandry and Dairying (DAHD). Recording and reporting formats for surveillance of Animal Rabies will be made available at all animal health facilities at Block, District and State levels.

Clinical Surveillance: all animals (Livestock, Pet, Stray and Wild Animals) having clinical signs of Rabies or sudden deaths in animals due to unknown causes but not confirmed by the lab.

Laboratory surveillance: Lab-based surveillance would be done when the suspected/confirmed animal is dead and post mortem is done and laboratory confirmation is needed to confirm whether the cases was Rabies. This is especially important when the dog is known to cause dog bites in an 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 FAT to find a Rabies case. Samples tested positive to FAT could be archived for molecular analysis and research purpose to identify the circulating virus in the region.

Surveillance in Wild animals

At present, the Department of Animal Husbandry and Veterinary in the state does not have any reporting mechanism for suspected or laboratory confirmed cases of animal rabies, rabies vaccinations and dog population management.

As Rabies virus is maintained in a wide range of wild animals, there may be disease transmission (Rabies) at the domestic-wild life interface in areas adjoining the forests. Therefore, collaboration between livestock and forestry sectors (wildlife) is important for disease surveillance, sharing of disease outbreak information and prevention and control program. Activities under this will be undertaken by State Forest Department in coordination with the veterinary Department, Local Governing Bodies and NGOs.

1. Free-ranging Wild animals: In case any clinical signs/pathological lesions of suspected Rabies is detected in any susceptible free-ranging wild animal, the respective wildlife/forest authorities should inform the veterinary department. The samples will be referred to the Regional/State/National Referral Laboratory by respective wildlife/forest authorities.

2. Captive wild animal: In case any clinical signs/pathological lesions of suspected Rabies are detected in any susceptible captive wild animal, the respective zoo authorities should inform the veterinary department. The samples will be referred to regional/state/national laboratories by respective wildlife forest authorities.

In both cases, active surveillance must be conducted to establish the following:

a. Identity whether there is a presence of any other wild animal in the area which may be having clinical signs or have pathological lesions of suspected Rabies.
b. Identify whether there is any suspected Rabies case in the domestic animal in the vicinity
c. Determine whether any domestic animal have been bitten by wild animals in the vicinity
d. Determine whether there were any Suspected, Probable, or confirmed Animal Rabies case in the vicinity among free roaming dogs, pet dogs, community owned dogs in local communities in inhabiting around the perimeters of wildlife areas, forest reserves. In such cases, the community leader should notify the local wildlife/forest authorities and the veterinary department.

Events Based Surveillance System and Public Health action to be taken for Human health Sector

The events observed in the human health sector and actions to be taken are as under:

1) Death of human following an animal bite

Neuro-encephalitic cases with H/O animal bite or Death of a person following animal bite reporting to a health facility (ID 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
- Do Risk Assessment and ensure PEP for contacts of suspected/confirmed Human Rabies case
- Sharing of data with Animal Husbandry/Municipal authorities

2) 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 weekly basis in terms of time, place and person to identify clustering and in terms of the Quality parameter as defined above
- Periodic data sharing with respective Animal Husbandry and Local Government (Municipalities)

Events Based Surveillance System and Public Health action to be taken for Animal Health Sector

1) Observe abnormal behaviour in a stray animal (dogs running amok or causing unprovoked bites).

Following events could be observed 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 suspected animal. In case of death, send the biological sample to the lab with TPL
- Issue advisory/ IEC about dead body disposal and use of milk or meat in case of livestock animal

2) Death of a pet following animal bite / unexplained death without H/O exposure or Death of a livestock following animal bite/unexplained death without H/O exposure

Actions 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 in the TLP (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
- Do Risk Assessment and ensure PEP of those in contact with the dead animals

3) Unexplained Death of wild animal (captive and free roaming both)

The event can be observed by a common man / Forest dweller / Workers / Woodcutters / wildlife officer / forest officers / veterinary / Health care worker etc.

Actions to be taken

- Immediately inform the concerned wildlife officer/ Municipal
- 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

4) Death of any stray Animal-dogs

The event can be observed by a common man/ vet/ municipal workers/ Healthcare worker etc.

Actions to be taken

- Immediately inform the municipality veterinarian/ 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 case search of cases and exposed animals in and around the area
- Conduct Risk Assessment and ensure full Rabies PEP for those who are exposed

Standard Case Definition to be used for Surveillance System:

A) Standard case definitions for Human Rabies

Rabies surveillance under the National Rabies Control Program and the Integrated Disease Surveillance Programme (IDSP) is of three types.

Case Definition:

Case Definition	Type of reporting/Format
Suspect Case: Death of a human with history of dog bite few weeks/months preceding death. Wherever available, the details of such cases will be shared in a line list– Name, Age, Gender, Address etc.	To be reported in **S form** by ANM/Health workers
Probable Case: A suspected human case plus history of exposure to a (suspect/probable) rabid animal. Exposure is usually defined as a bite or scratch from a rabies susceptible animal (usually dogs). It could also be lick exposure to open wound, abrasion, mucous membranes of the patient. A suspect rabid animal is a rabies-susceptible animal (usually dogs) which presents with any of the following signs at time of exposure or within 10 days following exposure: unprovoked aggression (biting people or animals or inanimate objects), hyper salivation, paralysis, lethargy, abnormal vocalization, or diurnal activity of nocturnal species. Whenever the history of mentioned signs cannot be elicited, the history of exposure to rabies-susceptible animal would be considered adequate. A probable rabid animal is a suspect rabid animal (as defined above) with additional history of a bite by another suspect / probable rabid animal and/or is a suspect rabid animal that is killed, died, or disappeared within 4-5 days of observing illness signs. **Wherever available, the details of such cases should be shared in a line list as per line list design of IDSP.**	To be reported in **P form** (by Medical Officers/Doctors
Laboratory Confirmed case: A suspect or a probable human case that is laboratory-confirmed. Laboratory confirmation by one or more of the following: 1. Detection of rabies viral antigens by direct fluorescent antibody test (FAT) or by ELISA in clinical specimens, preferably brain tissue (collected post mortem). 2. Detection by FAT on skin biopsy (ante mortem). 3. FAT positive after inoculation of brain tissue, saliva or CSF in cell culture, or after intra-cerebral inoculation in mice or in suckling mice. 4. Detectable rabies-neutralizing antibody titre in the serum or the CSF of an unvaccinated person. 5. Detection of viral nucleic acids by PCR on tissue collected post mortem or intra vitam in a clinical specimen (brain tissue or skin, cornea, urine or saliva).	To be reported by Lab Technician in **L-Form** (by Laboratories having confirmatory test facilities for rabies)

B) Standard case definitions for Animal Rabies

As per the WHO guidelines proposed case definitions and surveillance activities to be undertaken by the veterinary officer in case of Suspected, Probable and lab Confirmed animal Rabies are mentioned in table below:

Standard Case definition for Animal Rabies:	
Case	**Definition**
Suspected animal Rabies	A case that is compatible with a clinical case definition of animal Rabies. An animal that presents with any of the following signs- hyper salivation, paralysis, lethargy, unprovoked abnormal aggression (biting two or more people or animals and/or inanimate objects), abnormal vocalization and diurnal activity of nocturnal species' Or any animal showing the signs of dumb form of Rabies
Probable animal Rabies	A suspected case + reliable history of contact with a suspected, probable or confirmed rabid animal and/or An animal with suspected Rabies that is killed, died or disappears within 4- 5 days of observation of illness
Confirmed animal Rabies	A suspected or probable animal case confirmed in a laboratory
Not a case	A suspected or probable case that is ruled out by laboratory tests or epidemiological investigation (i.e., appropriate quarantine period in eligible animals).

Methods available for Dog Population Estimation

- **Through 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 recommended method as this could lead to under vaccination and shortage of resource material in the selected area.
- **By conducting local house to house questionnaire – based 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

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 free roaming dogs must be included in the survey.

Planning of Mass Dog Rabies Vaccination Campaign

A meeting with stakeholders (AHD, Health, Municipality, NGO, Rabies Committee) must be set to discuss the following:

1. Strategies on how to cover most of the population.

2. The vaccination teams should be divided into groups and be briefed on the schedule for the day, location, and the selected route.
3. The team should be equipped with enough ARV while maintaining a cold chain to undertake MDV.
4. Registration and permanent identification of all vaccinated dogs should be done with the issuance of a card for pet animals and with owners.
5. 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.
6. The use of a colour spray of all vaccinated dogs as temporary marking could be done for the stray/community owned dogs.
7. A survey should be undertaken soon after the completion of the MDV (within 3days) of the campaign to assess the numbers of marked and unmarked dogs.

Training of vaccinators, vaccine handlers, and dogcatchers

- 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 have been described below for conducting mass dog vaccination programme:

1. **House-to-house visits** – field Mobile teams visit individual houses and vaccinate the pet animals.
2. **Hospital/ clinic visits** – Dog owners take their dogs/cats at any time to private or government veterinary clinics.
3. **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.
4. **Capture/vaccinate/release campaigns** – In this case the program is merged with the sterilization program.
    a) **Mobile street vaccination plans –** For pet dogs, community dogs & FRDs vehicles would be used for gauging the areas and setting the base for vaccination.
    b) **Combined approach of all the above methods –** e.g., house-to-house vaccination can be combined with vaccination camp and mobile street vaccination plan.

Ensure community and dog owners are aware about vaccination campaign

A successful campaign will involve an intensive communication strategy about the date, and time of vaccinations. A detailed vaccination schedule of the place to be visited by the teams will be prepared in advance and distributed to all the concerned in-charges who in turn will inform the public so that they can bring their pets and community dogs to the designated areas. Mass community engagement campaigns will be done before the beginning of MDV.

Assessment of Post vaccination coverage

1. To assess the success of mass dog vaccination it is essential to conduct sero-monitoring of the vaccinated dog population.
2. A survey will be undertaken within one week of the MDV campaign in the vaccinated areas to assess the numbers of marked /unmarked dogs, and conduct proportional counts (count the number of dogs with colour mark) and also by using a questionnaire survey of the household.
3. A revaccination campaign will be organized if the coverage is found to be below 70% of the estimated dog population.
4. The details of animals vaccinated in the field will be reported using the Monthly Animal Health Report Form to the local authority.
5. The local authority will then issue a completed mass vaccination certificate to the village/block/district.

How to ensure sustainability of the Rabies control program?

To ensure sustainability of the Rabies control program there is a need for creation of separate division for Rabies in the department for planning and implementing the activities of Rabies program. There should also be sufficient fund for Capacity building of human resources, vaccines, logistics and diagnostics.

General guidelines for Pet Owners:

1. To be a responsible pet owner, one should protect the pets and keep vaccinations up to date. Pets should not be allowed to roam.
2. Do not leave food of any kind outside the home and use garbage can with lids, to avoid attracting stray animals.
3. 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.
4. Bats and other wild animals should be kept out of dwellings by closing any small
5. opening they can use to enter.
6. If the pet is bitten or has had physical contact with a potentially rabid wild animal,
7. wear gloves to examine or wash your pet. Contact your local veterinarian for further advice.

Rabies is more common due to the bite of Stray Dogs. Free-roaming dogs may pose a serious risk to public health through dog bites and transmission of diseases such as rabies, leishmaniasis and human cystic echinococcosis. These free-roaming street dogs can transmit infectious diseases to pet dogs, livestock, and wildlife, and may also predate livestock. Free-roaming dogs are often a source of nuisance through barking and may pollute areas with faeces. The risks of dog bites and the nuisance created can lead to poor human-animal relationships within the community and the risks to public health can have huge economic implications too.

The International Companion Animal Management Coalition define dog population management as "To manage roaming dog populations and the risks these may present, including population size reduction when this is considered necessary". Dog population management (DPM) is not a time-limited project, but a system of services that must be sustained and adapted to change the way in which people keep and live amongst dogs. These free-roaming dogs roam freely in the community unrestricted by physical boundaries, though they may well return to a familiar property or feeding station to rest and eat. In fact, in most countries, many roaming dogs have an 'owner' but they are currently roaming unsupervised. Even those without a specific household may not be entirely unowned, they may be community dogs, with more than one household offering some form of care in the form of food, shelter or even limited veterinary care.

Culling is often strongly opposed by local people especially when the methods used to kill dogs are inhumane and the suffering of dogs is visible on the streets. The community point of view is that culling is an in- humane but effective approach towards dog population management.

Re-Homing

Re-homing centres can only provide temporary shelter before adoption to a new home. Removing dogs to re-homing centres requires a large infrastructure and itis difficult to meet both the physical and psychological needs of the dogs in such an environment. Hence, they are expensive.

Dog Population Management

Dog Population Management (DPM) aims to have a sustained influence on the processes within dog population dynamics to change the sub-populations of dogs in a targeted way. For example, reducing abandonment of owned dogs, reducing breeding in unowned and community dogs, and increasing community engagement will result in a smaller unowned dog population and a better cared for and stable population of community dogs. Dog population dynamics differ between communities and therefore population management needs to be adapted to local conditions, there is no one size fits all solution. To design a tailor made DPM system you need to assess and understand your local dog population dynamics, and then continue to monitor the dog population to allow for evidence-based evaluation.

Canine Catch-Neuter-Vaccinate Return (CNVR)

Good Practice Guides

Catch-Neuter Return (CNR) is where dogs are caught, surgically sterilized, and then returned to the exact location where they were caught. The aim of CNR is to minimise the process of reproduction in the population of dogs that are already roaming, stemming this source of the next generation of roaming dogs and creating a healthier population by reducing the energetic costs of reproduction and the stress and disease risks involved in breeding. It also prevents the birth and suffering of many puppies that would otherwise have died within their first year of life on the streets. Dogs going through CNR are usually also vaccinated against

rabies so that they cannot transmit this virus to other dogs or humans. Where these dogs make up a large proportion of the dog population, this vaccination through CNR can also create herd immunity, where enough numbers of the dogs become immune to Rabies so that the virus can no longer persist and die out. However, achieving herd immunity for Rabies usually also requires concerted mass vaccination of the whole dog population, not just those dogs going through CNR. Epidemiological models looking at annual mass vaccination campaigns have suggested that at least 70% of the dog population needs to be vaccinated annually to keep above the critical proportion of immune dogs. This 70% target allows for population turnover where some vaccinated dogs die, and puppies are born - between vaccination campaigns.

There is evidence to suggest that a combination of neutering, vaccinating, and returning dogs back into their community:

1. Reduces the dog population.
2. Reduces the prevalence of rabies.
3. Reduces the number of dog bites.
4. Improves individual dog physical wellbeing.
5. Improves human-animal relationships between dogs and communities in which they live in.

Catch-Neuter Return has been shown to have benefits, but we should note that it acts on just one part of dog population dynamics, all be it an important part. To achieve effective and sustainable management, it must be used in combination with other DPM services. CNR can also be considered an alternative approach to removal of dogs from the street either through culling or sheltering – and may be particularly appropriate where the roaming dog population exceeds the potential number of adoptive homes.

There are a huge number of free-roaming, reproductively active dogs in the world. The number of street dogs is because of uncontrolled breeding and abandonment of both street and pet dogs. Free-roaming dogs may be a source of nuisance, potential risk to livestock and wildlife and pose serious public health risks. Appropriate solutions in dog population management must consider the specific problems faced within a community, the origin of the dogs, their movement patterns, behaviour and reproductive activities, and the connectivity between the pet and street dog populations to successfully address the challenges within that community.

Whilst CNR may be a useful tool in controlling dog populations, all surgical procedures have risks, and CNR creates the potential for welfare problems including injury, disease transmission and even death. Also, the potential longer-term detriments of elective neutering cannot be overlooked. To ensure that good dog welfare standards are maintained, the focus of CNR needs to be on individual dog welfare as well as the number of dogs to be neutered.

Strategies to be adopted

1. Presently there is no ABC centre in the State. There is no funding source for the establishment of ABC Centre.
2. The licensing of owned dogs is strictly implemented by the Municipality. It is renewed every year based on ARV.
3. Enumeration of Dog population to be done.
4. A system for training or refresh courses on responsible dog management for professionals in animal health at local level will be proposed.
5. Training will be imparted with the help of professionals from the State Department of Animal Husbandry & Veterinary services, to all stakeholders at all levels.
6. The funds will be sourced through ASCAD/NRCP by the State Department of Animal Husbandry& Veterinary services.

7. Training on Rabies will be provided to Veterinary professionals and animals handlers, also both medical, para medical staff in private health sector.
8. Plan will be developed by Animal Husbandry Department to create awareness for pet dog owners through periodical campaign and other stake holders for effective management.

Standard Operating Procedure for Free Roaming Dog Population Estimation

The population estimate of free roaming dogs (FRD) in the intended area for conducting Mass canine vaccinations and even Animal Birth Control (ABC) is essential to:

- To estimate the magnitude of resources required for interventions such as MDV. For e.g., number of vaccines required, dyes, identification marks, bikes, manpower etc.
- To evaluate the efficacy of interventions and course correction for subsequent MDV campaigns.

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% of dog population**).

Following methods are suggested for estimating the FRD population for vaccination:

- **Mark-Release-Recapture Methods:** as the name suggest, a sample of dogs are captured and marked in a manner that does not affect the animal survival and then 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 (i.e. marked dogs) to first-time captures in the second sample gives the Lincoln-Petersen estimate of total population size. This method can be planned in two ways:

  Single-Sight (SS) Surveys – AM survey is done involving 2 surveyors in each team, travelling on a 2- wheeler bike through all parts of an allocated zone and recording details of every dog they see. Both people keep a look out 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. This is done by conducting a survey again in the same region (1 or 2 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 should be matched to ascertain the number of dogs seen once and those seen twice during the entire survey.
- **By using statistical software:** The population estimate with 95% confidence intervals can be obtained by using the Application Super Duplicate stool 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.
- **Through using the local animal census database:** The canine census has been included in the 20th livestock census, 2018. If enumeration of the dog population is not possible, the block-level census could be used for planning. However, this is not recommended method as this could lead to under vaccination and shortage of resource material in the selected area.
- **By conducting local house to house questionnaire- based 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.

CHAPTER 10 LABORATORY DIAGNOSIS OF RABIES

Diagnosis of Human and Animal Rabies is a challenge due to the lethality of the Rabies virus and difficulties encountered to obtain the samples for undertaking laboratory diagnosis. However, strengthening Rabies diagnostics lab is essential while envisaging a plan to eliminate Rabies. A definitive, reliable diagnosis of Rabies in humans and animals requires appropriate laboratory structure with adequate bio safety measures.

Importance of diagnosis of Rabies in humans

Although the diagnosis of Classical Rabies can be made easily based on history and the typical clinical signs and symptoms, the paralytic form of Rabies often is difficult to diagnose. Apart from this, the laboratory support for Rabies is important for the following:

1. Confirmation of clinical diagnosis-especially in paralytic/atypical cases.
2. Prophylactic vaccination to relatives, clinical & nursing staff.
3. Characterization of causative agent/molecular epidemiology.
4. National Rabies Control Programme/SAPRE: Surveillance and estimation of disease burden.

The confirmation of the diagnosis of rabies in animals is required for appropriate public health response and inter-sectoral coordination.

Sampling

Sampling and various laboratory tests available for diagnosis of humans Rabies (Ante-Mortem & Post-Mortem) and animals (post-mortem) are as under:

- **Sampling for post-mortem diagnosis in humans and animals:** Brain tissue is the preferred specimen for post-mortem diagnosis in both humans and other animals. In many situations, it may not be possible to remove the brain for post-mortem sampling because of factors such as family consent or practical and biosafety issues related to the removal of animal brains in the field. Some of these challenges can be overcome by collecting samples with effective, well-established techniques that require less invasive post-mortem routes, such as through the orbit or foramen magnum. A diagnostic sample can be collected without opening the skull, for example by introducing a 5-mm drinking-straw or a 2-mL disposable plastic pipette into the occipital foramen in the direction of an eye or using a trocar to make a hole in the posterior wall of the eye socket and introducing a plastic pipette or straw. Samples can be collected from the rachidian bulb, the base of the cerebellum, the hippocampus, the cortex and the medulla oblongata. When a straw is used, it should be pinched between the fingers to prevent material from escaping on withdrawal.
- **Sampling for intra vitam diagnosis in humans Secretions,** biological fluids (such as saliva, CSF, tears, serum), and some tissues (such as skin biopsy samples, including hair follicles at the nape of the neck) can be used to diagnose rabies during life. Although serum and CSF may not be very sensitive specimens for ante-mortem diagnosis, particularly in the early course of illness, a positive result provides valuable diagnostic information. The samples that afford the highest diagnostic sensitivity are at least three saliva samples, taken at intervals of 3–6 h, and skin biopsies (including hair follicles). Ideally, samples should be stored at –20 °C or less. Ideally, brain tissue should be kept refrigerated or frozen until testing. If this is not possible, samples can be preserved at ambient temperature in a 50% glycerine–saline solution. Freezing of samples in glycerine is not recommended. The glycerine must be removed by washing prior to testing, and acetone fixation is not recommended before the direct fluorescent antibody test.

Examination of chemically fixed specimens for viral antigens can be both sensitive and specific if appropriate issues and tests are used but are not recommended for routine diagnosis. If specimens are received in formalin, the duration of brain fixation should be approximately 7–14 days before embedding in paraffin. Wet tissue specimens should be transferred from formalin to absolute ethanol for subsequent molecular diagnosis and antigen detection. For molecular studies and genetic characterization of viral strains, the impregnation of brain tissue or body fluid suspected of infection with RABV on filter paper containing proper inactivating chemicals allows safe, stable, cost–effective shipment of samples at ambient temperature. Effective viral inactivation should nevertheless be ensured before shipment.

Laboratory network for Rabies diagnosis in the State

Currently there is no laboratory for testing of human or animal rabies cases, and no established SOP for collection, transportation and testing of sample in the State.

A. Regional Referral Laboratories

Regional Diagnostics Laboratory-ICMR Dibrugarh and Assam Medical College, Guwahati will serve as a Regional Referral Laboratories (RRL) for the State to support the Rabies diagnostics in human and North Eastern Regional Disease Diagnostic Laboratory (NERDDL), Guwahati, Assam for animal.

B. State level Laboratories

The two SRLs for Nagaland are:

1. **Human component**: Nagaland Institute of Medical Science and Research (NIMSR), NHAK, Phriebagie, Kohima, Nagaland.
2. **Animal component**: ELISA Lab., NHAK, Kohima.

Role of State Level Reference Laboratories

The SRLs will perform the serological and Nucleic Acid Amplification Test (NAAT) such as Direct Fluorescent Antibody Test (DFA), Real Time-Polymerase Chain Reaction (RT-PCR) and Enzyme Linked Immune Sorbent Assay (ELISA) for the diagnosis of suspected human and animal samples. In addition to performing these tests, SRLs will provide the training to the district level laboratories.

Human Diagnostic Labs

- Undertake capacity building on the epidemiological and microbiological aspects of Rabies Diagnosis by using qualified ELISA, PCR, and FAT etc
- Establish a system to regularly assess staff capacity to accurately diagnose suspect Rabies samples (both human and animal)
- Proposal to be sent to NCDC for setting up Laboratory for Human Rabies Diagnosis and for recruiting manpower.

Animal Diagnostic Labs

- Provide training on brain sample collection, packing, transportation, processing of samples by Lateral Flow Assay (LFA) to district level laboratories (Kohima and Tuensang)
- Test the samples by employing Direct Fluorescent antibody Assay (DFA)/Direct Rapid Immuno-histochemistry Test (dRIT)
- Transport of samples (brain/serum) in the cold chain to the Regional Laboratory along with the details

The strengthening of Veterinary sector for Rabies diagnosis and sero-surveillance

- Animal Rabies Diagnostic Laboratory will be established by seeking funds from NRCP/ through One Health Programme as per required standards
- Training of field Veterinarians for Sample collection from Rabies suspected animal cases/ PM cases
- Pre-exposure prophylaxis to all Vets, Para vets and vaccinators will be provided from Health department

Interpretation of the results and reporting to the National portal (IHIP)

The results of the diagnostic tests should be interpreted appropriately *i.e.* positive, negative, false positive and false negative. The necessary positive and negative controls should be used along with the test samples. The test results to be verified by the microbiologists and to be entered in the designated portal for Rabies surveillance.

CHAPTER 11 INFORMATION EDUCATION COMMUNICATION (IEC)

There is a need for comprehensive public awareness campaign about rabies prevention and vaccination both in human and animals, as well as for responsible pet ownership.

Health Department

1. Display of Banners, posters, and other IEC materials on dog bite management to create awareness among the public.
2. Awareness programme for school students and training programme for medical students.
3. Creating Awareness to public through audio visual aids and social media.
4. Block Development Officer to be approached and with his help to form small scale Rabies control programme.

Link for Rabies IEC:
https://drive.google.com/drive/u/0/folders/1ejyt5iS9LdNfuOL46MZQPP3okOqSIaJD

Animal Husbandry

1. Available Rabies awareness material with NAPRE shall be utilized for public awareness.
2. Efforts will be made to include knowledge on Rabies in school and college curriculum.
3. Use of Media *viz.* social media, TV, Radio, Newspapers etc. for awareness programme.
4. Involvement of NGOs and local bodies to participate in generating awareness programme.

CHAPTER 12 PLAN OF IMPLEMENTATION OF SAPRE

Key Principles of SAPRE

The State Action Plan for Rabies Elimination (dog mediated) in Nagaland is based on the following 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 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 post-exposure prophylaxis for all animal bite victims and creating well responsive Public Health System.
- **Animal health component:** To achieve at least 70 to 80 % Anti Rabies vaccination coverage among stray/pet dogs in and around the State of Nagaland.

Strategies of SAPRE

The strategies of both human and animal health components are described as under:

A) Strategies of Human Health Component:

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

1. Sustained availability & easy accessibility of Anti Rabies Vaccine (ARV) and Anti Rabies Serum (ARS) to all animal bite victims at the State/ District Hospitals, CHCs and PHCs.
2. Implementation of ID route ARV in the dog bites case attending in all PHCs and CHCs and sensitization of all health professionals both government and private sectors to routinely practice ID route instead of IM route for Rabies prophylaxis.
3. Strengthening infrastructures for treating the victims of animal bites by establishing Model Anti Rabies Clinics in phase manner.
4. Ensuring availability of trained manpower concerning appropriate animal bite management/ID inoculation/ARS infiltration.
5. ARV and ARS to be procured and made available to all public health units up to PHC level.
6. Availability of WHO pre-qualified vaccines and RIG to high-risk and exposed individuals.
7. Develop SOPs for sharing of information between sectors, been agreed upon at a State level.
8. Draft SOPs for Outbreak response and the same to be shared with Animal Husbandry department and Municipality.
9. Prepare SOPs for an active response to outbreaks.
10. Uniform SOPs to be followed. To engage Rapid Response Teams for an outbreak.

11. Cold chain will be maintained (in refrigerator/ILR) and distributed from State 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

1. Training of health professionals and paramedical on Rabies pre & post-exposure prophylaxis as per National Guidelines.
2. Training of State, District and below District level health care professionals on program management aspects.
3. Joint training of Health and Veterinary professionals on the operational aspect of the Rabies Elimination plan.
4. Training and capacity building of laboratory professionals on Rabies diagnosis.
5. Training on Surveillance of animal bites and Rabies case investigations and notification.

Strengthening Surveillance of Animal bites and Rabies cases in Human

1. Strengthening periodic reporting system about animal bites and Rabies incidences through IDSP and IHIP.
2. 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 diagnosis.
3. Establishing Sentinel surveillance system for animal bite cases through Model Anti Rabies Clinics (**MARC**).

B) Strategies for Animal Health Component:

1. A monitoring unit at district level to strengthen monitoring, supervision of procurement, availability, surveillance, and quality of Anti-rabies vaccines as per OIE standards/ agencies licensed at National Level will be done by Animal Husbandry and Municipality who will help in surveillance.
2. 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 North Eastern Regional Disease Diagnostic Laboratory (NERDDL), Guwahati, Assam for Rabies antigen detection.
3. The State Department of Animal Husbandry and Municipality will monitor the progress towards elimination of Rabies.
4. Identification and Quarantine of Rabies suspected dogs in Kennel/ shelters *i.e.* an isolation wards for rabies suspected animals for which the funding source is yet to be explored.
5. Training of dog catchers will be done through funds from Municipality.
6. Engagement of manpower for vaccination, dog catching and ABC programme.
7. Mass Dog Vaccination (MDV) shall be carried out in all the districts in campaign mode.
8. The funding will be sought from ASCAD scheme to cover more than70% of dog population. Also, PEP to all dog bite cases (including livestock) will be covered.

The funds for Human health components will continue to be sourced from NHM, the funding for the animal health components will be explored through existing ASCAD Schemes or revenue available with Municipal corporations or State Veterinary Department. The delivery of services for the animal health shall be done through the already existing veterinary infrastructures and established channels like Animal Husbandry Department, Urban/Rural Governing Bodies, NGOs and Municipal Affairs.

As the human health component under the National Rabies Control Program (NRCP) is already being implemented in the country, the identified States Nodal Officers and District Nodal Officers will continue implementing the activities of the human health component.

For Animal Health Components, the respective States will identify and nominate State and District Nodal Officers and will coordinate with identified States Nodal Officers and District Nodal Officers of Human Health Component for implementing the activities.

A brief about the plan of implementation for both the components are as under:

Particulars	Human Health Component	Animal Health Component
Nodal agency for planning and execution at State level	State Health Department, State NHM • Identified State Nodal Officer (SNO) for NRCP will coordinate the activities	State Animal Husbandry Department, Director State AH Department will nominate a State Nodal Officer for Animal Health Component • The State Veterinary department will implement the activities of animal health component in cooperation with municipal bodies in urban areas and Panchayati Raj systems in rural areas • It is the responsibility of State Animal Husbandry Department to devise methodology and assign duties to participating officer for monitoring surveillance activities
	Plan will be implemented as per availability of resources and prevalence of the disease.	
District Level	District Health Officer • Identified District Nodal Officer (DNO) for NRCP will coordinate the activities	District Nodal Officers (Chief. Vet Officer) • Coordinate with local governing bodies, local authorities, and NGOs
	Plan will be implemented as per availability of resources and prevalence of the disease.	
Block Level	Block Medical Officers • Implementation of the program at ground level • Coordination with block veterinary officer • Reporting to District Nodal Officer (DNO) • Feedback to DNO for refinement/ betterment of the program as per field scenario	Block Veterinary Officer or equivalent • Implementation of the program at ground level • Coordination with block medical officer • Reporting to District Nodal Officer, Animal Husbandry • Feedback to District Nodal Officer, Animal Husbandry for refinement/ betterment of the program as per field scenario

CHAPTER 13 FINANCIAL PLAN FOR SAPRE IMPLEMENTATION FOR ONE YEAR

Proposed Budget Plan for SAPRE implementation activities

A. COMPONENT-WISE TENTATIVE BUDGET BREAK-UP PLAN FOR ANIMAL COMPONENT (FROM ASCAD):

Improvement of existing infrastructure, capacity building of existing human resource and mass dog vaccination will be carried out in the first year of dog mediated rabies elimination by 2030.

Table 9: Tentative budget break-up plan for Animal component:

Broad Component	Activity	Total cost
Surveillance	Operational cost	6,50,000
	Infrastructure	60,00,000
	Training	22,50,000
Prevention and Control	Cost of ARV	43,00,000
	Infrastructure for cold chain maintenance	16,00,000
	Human resource	31,20,000
Laboratory Diagnosis	Cost related to collection of samples	4,80,000
	Cost related to sample packaging and transportation	6,00,000
	Human resource	0
	Cold chain maintenance	0
IEC	Organizing awareness campaign	21,00,000
Total		2,11,00,000

B. District Wise Tentative Budget Break-Up Plan For Animal Component (from ASCAD):

Table 9.1: **Kohima District** Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	Operational cost	50,000	For one FY
	Infrastructure	5,00,000	Establishment of Check Gate & Holding facilities
	Training	2,00,000	For Veterinary
Prevention and Control	Cost of ARV	4,00,000	
	Infrastructure for cold chain maintenance	50,000 x 3 1,50,000	For ILR in 3 Centres
	Human resource	2,40,000	Recurring cost for Holding facilities
Laboratory Diagnosis	Cost related to collection of samples	40,000	
	Cost related to sample	50,000	

	packaging and transportation		
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**1,00,000**	**IEC print cost Mobility cost**
Total	**17,30,000**		

Table 9.2: **Dimapur** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**2,00,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**6,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 Centres**
	Human resource	**4,80,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**200,000**	**IEC print cost Mobility cost**
Total	**23,20,000**		

Table 9.3: **Kiphire** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**1,50,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**3,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 centres**
	Human resource	**2,40,000**	**Recurring**

			cost for Holding facilities
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**16,80,000**		

Table 9.4: **Longleng** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**1,50,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**300,000**	
	Infrastructure for cold chain maintenance	**50,000 x 2 1,00,000**	**For ILR in 2 centres**
	Human resource	**2,40,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**1,00,000**	**IEC print cost Mobility cost**
Total	**15,30,000**		

Table 9.5: **Mokokchung** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**

	Training	**2,00,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**4,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 centres**
	Human resource	**2,40,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**18,30,000**		

Table 9.6: Mon District Tentative Budget Break-Up Plan**:**

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**2,00,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**4,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 centres**
	Human resource	**2,40,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**18,30,000**		

Table 9.7: **Noklak** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	Operational cost	50,000	For one FY
	Infrastructure	5,00,000	Establishment of Check Gate & Holding facilities
	Training	1,50,000	For Veterinary
Prevention and Control	Cost of ARV	2,00,000	
	Infrastructure for cold chain maintenance	50,000 x 2 1,00,000	For ILR in 2 centres
	Human resource	2,40,000	Recurring cost for Holding facilities
Laboratory Diagnosis	Cost related to collection of samples	40,000	
	Cost related to sample packaging and transportation	50,000	
	Human resource		Existing HR
	Cold chain maintenance		Existing infrastructure
IEC	Organizing awareness campaign	1,00,000	IEC print cost Mobility cost
Total	14,30,000		

Table 9.8: **Peren** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	Operational cost	50,000	For one FY
	Infrastructure	5,00,000	Establishment of Check Gate & Holding facilities
	Training	2,00,000	For Veterinary
Prevention and Control	Cost of ARV	3,00,000	
	Infrastructure for cold chain maintenance	50,000 x 2 1,00,000	For ILR in 2 centres
	Human resource	2,40,000	Recurring cost for

			Holding facilities
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**16,80,000**		

Table 9.9: **Phek** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**2,00,000**	**For Veterinary**
Prevention and Control	**Cost of ARV**	**3,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 centres**
	Human resource	**2,40,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**17,30,000**		

Table 9.10: **Tuensang** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	Operational cost	50,000	For one FY
	Infrastructure	5,00,000	Establishment of Check Gate & Holding facilities
	Training	2,00,000	For Veterinary
Prevention and Control	Cost of ARV	4,00,000	
	Infrastructure for cold chain maintenance	50,000 x 2 1,00,000	For ILR in 2 HUs
	Human resource	2,40,000	Recurring cost for Holding facilities
Laboratory Diagnosis	Cost related to collection of samples	40,000	
	Cost related to sample packaging and transportation	50,000	
	Human resource		Existing HR
	Cold chain maintenance		Existing infrastructure
IEC	Organizing awareness campaign	2,00,000	IEC print cost Mobility cost
Total	17,80,000		

Table 9.11: **Wokha** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	Operational cost	50,000	For one FY
	Infrastructure	5,00,000	Establishment of Check Gate & Holding facilities
	Training	2,00,000	For Veterinary
Prevention and Control	Cost of ARV	4,00,000	
	Infrastructure for cold chain maintenance	50,000 x 3 1,50,000	For ILR in 3 Centres
	Human resource	2,40,000	Recurring cost for Holding facilities
Laboratory Diagnosis	Cost related to collection of samples	40,000	

	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**18,30,000**		

Table 9.12: Zunheboto District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**50,000**	**For one FY**
	Infrastructure	**5,00,000**	**Establishment of Check Gate & Holding facilities**
	Training	**2,00,000**	**For Health &Veterinary**
Prevention and Control	**Cost of ARV**	**3,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**For ILR in 3 centres**
	Human resource	**2,40,000**	**Recurring cost for Holding facilities**
Laboratory Diagnosis	**Cost related to collection of samples**	**40,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance		**Existing infrastructure**
IEC	**Organizing awareness campaign**	**2,00,000**	**IEC print cost Mobility cost**
Total	**17,30,000**		

C. COMPONENT WISE TENTATIVE BUDGET BREAK-UP PLAN FOR HUMAN COMPONENT (From NHM):

Capacity building of existing human resource through training of staffs and improvement of the availability of Post exposure anti-rabies vaccines (ARV) and anti-rabies serum (ARS) is planned for the first year of Dog-mediated rabies elimination by 2030.

Table 10: Tentative budget break-up plan for human component:

Broad Component	Activity	Total cost
Surveillance	Operational cost	12,00,000
	Infrastructure	60,00,000
	Training	33,00,000

Prevention and Control	Cost of ARV Cost of ARS	43,00,000 15,00,000
	Infrastructure for cold chain maintenance	15,50,000
	Human resource	36,00,000
Laboratory Diagnosis	Cost related to collection of samples	6,00,000
	Cost related to sample packaging and transportation	6,00,000
	Human resource	
	Cold chain maintenance	5,00,000
IEC	Organizing awareness campaign	34,00,000
Total	**2,65,50,000**	

D. DISTRICT-WISE TENTATIVE BUDGET BREAK UP PLAN FOR HUMAN COMPONENT (From NHM)

Table 10.1: **Kohima** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure	**20,00,000**	**Establishment of MARC**
	Training	**3,00,000**	**For all categories of HCW**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **2,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**4,80,000**	**Recurring cost for MARC**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**20,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**40,50,000**		

Table 10.2: **Dimapur** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure	**20,00,000**	**Establishment of MARC**
	Training	**3,00,000**	**For all categories of**

			HCW
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **2,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**4,80,000**	**Recurring cost for MARC**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**20,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**40,50,000**		

Table 10.3: **Kiphire** District Tentative Budget Break-Up Plan:

Broad Component	**Activity**	**Total cost**	**Remarks**
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**2,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**3,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 2** **1,00,000**	**ILR in 2 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**14,90,000**		

Table 10.4: **Longleng** District Tentative Budget Break-Up Plan:

Broad Component	**Activity**	**Total cost**	**Remarks**
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**2,00,000**	**For all categories of HCW**

Prevention and Control	**Cost of ARV** **Cost of ARS**	**3,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 2** **1,00,000**	**ILR in 2 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**2,00,000**	**For Printing, Mobility, etc.**
Total	**13,90,000**		

Table 10.5: **Mokokchung** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**17,40,000**		

Table 10.6: **Mon** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention	**Cost of ARV**	**4,00,000**	

and Control	**Cost of ARS**	**1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3 1,50,000**	**ILR in 3 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**17,40,000**		

Table 10.7: **Noklak** District Tentative Budget Break-Up Plan:

Broad Component	**Activity**	**Total cost**	**Remarks**
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV Cost of ARS**	**2,00,000 1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 2 1,00,000**	**ILR in 2 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**2,00,000**	**For Printing, Mobility, etc.**
Total	**13,90,000**		

Table 10.8: **Peren** District Tentative Budget Break-Up Plan:

Broad Component	**Activity**	**Total cost**	**Remarks**
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	infrastructure		
	Training	**2,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV Cost of ARS**	**3,00,000 1,00,000**	
	Infrastructure for cold chain	**50,000 x 2**	**ILR in 2 HUs**

	maintenance	**1,00,000**	
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**40,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**14,80,000**		

Table 10.9: **Phek** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**17,40,000**		

Table 10.10: **Tuensang** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	infrastructure	**20,00,000**	**Establishment of MARC**
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **2,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 2** **1,00,000**	**ILR in 2 HUs**
	Human resource	**4,80,000**	**Recurring cost for MARC**

Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**20,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**40,00,000**		

Table 10.11: **Wokha** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	Infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**
	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**17,40,000**		

Table 10.12: **Zunheboto** District Tentative Budget Break-Up Plan:

Broad Component	Activity	Total cost	Remarks
Surveillance	**Operational cost**	**1,00,000**	**For one FY**
	infrastructure		
	Training	**3,00,000**	**For all categories of HCW/ASHAs**
Prevention and Control	**Cost of ARV** **Cost of ARS**	**4,00,000** **1,00,000**	
	Infrastructure for cold chain maintenance	**50,000 x 3** **1,50,000**	**ILR in 3 HUs**
	Human resource	**2,40,000**	**At District Level**
Laboratory Diagnosis	**Cost related to collection of samples**	**50,000**	
	Cost related to sample packaging and transportation	**50,000**	
	Human resource		**Existing HR**

	Cold chain maintenance	**50,000**	**Recurring cost**
IEC	**Organizing awareness campaign**	**3,00,000**	**For Printing, Mobility, etc.**
Total	**17,40,000**		

Table 10.13: Total Budget

SL. NO.	Particulars	Amount (Rs)
1.	**Total Operational cost required for Animal component (A/B)**	**2,11,00,000**
2.	**Total Operational cost for Human component (C/D)**	**2,65,50,000**
3.	**Gross Total**	**4,76,50,000**
Rupees Four Crore Seventy-Six Lacs Fifty Thousand only		

CHAPTER 14 MONITORING AND EVALUATION

In both Health and Veterinary sectors, the National/State will jointly monitor the implementation of the programme regularly. The key objective of monitoring and evaluation will be to assess the progress made at each level to achieve the target of rabies elimination, to identify challenges and to provide the solutions to the extent possible by advocacy and facilitation.

Input Indicators:

The input indicators are those indicators who will assess the progress of the states with respect to their preparedness for formulation and operationalization of State action plans. These input indicators are also a measure of successful implementation of National Action Plan for Rabies elimination through continues advocacy among stakeholders at national and state level.

The input indicator for monitoring and responsible stakeholders will be as under:

Sl. no.	Indicators	Responsible stakeholders
1	Number of States where advocacy for Rabies control program has been done at all levels	State Animal Husbandry Department, and State Health Department
2	Number of States who have formulated SAPRE and submitted it to national nodal agencies in the human and veterinary sector	Animal Husbandry Department, Health Department,
3	Number of States who have structured mechanism for Rabies notification both in the human and veterinary sector	State Animal Husbandry Department, and State Health Department
4	Number of states who have developed relevant Technical Guidelines; Standard Operating Procedures for human and animal health components of SAPRE	State Animal Husbandry Department, State Health Department and wild life sector
5	Number of States which have designated State Program Management Unit for operationalization of SAPRE for both human and animal health component	State Animal Husbandry Department, State Health Department and wild life sector
6	Number of states who have earmarked funding for animal and human components	State Animal Husbandry Department and State Health Department
7	Number of states who has organized training programs for Medical, Veterinary and allied manpower for different components of SAPRE	State Animal Husbandry Department, and State Health Department
8	Number of states-initiated School Health awareness Programme for Rabies prevention	Department of Human Resources
9	Number of States who have planned and executed and completed Dog Enumeration exercises or mapping of risk zones for undertaking animal health component activities	State Animal Husbandry Department, and State Health Department, wild life sector and State task force identified by state govt for SAPRE

10	Number of States who have planned and executed and completed mass dog Vaccination	State Animal Husbandry Department, State Animal Welfare Board
11	Number of States who have planned executed and completed Strategic DPM / ABC activities	State Animal Husbandry Department, State Animal Welfare Board
12	Number of Sate labs strengthened to carry out lab diagnosis for rabies as envisaged under NAPRE both in the health and veterinary sector	State Animal Husbandry Department, and State Health Department

Process Indicators

The process indicators are those indicators that are defined to measure the progress of the Core component of NAPRE *i.e.* Human health and Animal health component.

The process indicators to assess the progress of target achievements and their means of verification is described as under:

Process indicators for Human Health Component:

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
1. Timely completion of PEP for animal bite victims.	Number of States who have adequate supply ARV and ARS at animal bite management facilities	ARV/ARS procurements and Utilization % of facilities with no Rabies vaccines and serum stock out	Stock register, Records and reports available at Animal Bite Management facilities / Hospital records/ Media reports about shortage/ Public Grievances	State Health Departments and State Nodal Officers of NRCP DVDAMS portal/ Media Supervision reports
	Number of States who have implemented ID Route in major facilities	% of facilities implementing ID route of ARV	NRCP format	State health Department (SNO, NRCP)
	To assess the RIG utilization and coverage	% of designated health facilities with no RIG stock-outs % of Category 3 bites received RIG	Review of annual report on RIG use NRCP Monthly format	
	PEP completion rate among eligible Rabies exposed cases	%of eligible cases with PEP completed	NRCP reports	NRCP reports, Operational research
	Pre-exposure Prophylaxis among high risk categories and	% of at-risk groups that receive complete dose of Pre-exposure	NRCP reports	NRCP reports, Immunization reports

	children	prophylaxis asper guidelines		
2. Capacity building	Trained staff of animal bite management	Number of staffs trained in facilities on appropriate animal bite management and Rabies PEP	Number of training certificates issued Trained Participants List	NRCP Training Reports
		% of facilities with trained staff with the bite wound management guidelines		
3. Diagnostic Support	Strengthening laboratory diagnostic capacity for Human Rabies Diagnosis	% of laboratories equipped with diagnostic facilities Number of samples for Rabies submitted and tested	Laboratory assessment reports	NRCP reports, SRL & RRL reports, Report of Disease Surveillance unit
4. Surveillance	Strengthening surveillance of Rabies cases and animal bites	% facilities reporting Rabies cases and animal/dog bites	NRCP Reports and IDSP/ IHIP Reports	NRCP IDSP Disease Alert Report Surveillance unit (web portal)

Process indicators for Animal Health Component:

Activities	Technical indicator	Objectively Verifiable Indicator(s)	Means of verification	Source of information
5.Dog enumeration of Vaccination	Enumeration exercise/ Risk zone mapping	% of Blocks/ Districts completed enumeration of dogs % of mapped high-risk areas in District	State Animal department Format	State Animal Husbandry Department
	Mass Dog Vaccination with a target to vaccinate more than 70% of dog population Annually	Proportion of dogs vaccinated for Rabies	Post vaccination surveys in each of the States	State Animal Husbandry Department annual vaccination reports
		% of States with 70% vaccination coverage	Number of doses of Rabies vaccine administered	State Animal Husbandry Department annual vaccination reports

	Dog Population management	% Change in Dog population in respective areas	Change in the number of FRD, Pet and community owned dogs	Survey reports of State Animal Husbandry Department
6.Diagnostic support for animal rabies diagnosis	Strengthening Lab capacity	Number of labs strengthened in veterinary sector for Rabies diagnosis	Reports	Reports
7. Containmen t	Containment of Rabies cases in Identified areas	Proportion of animal Rabies cases confined and number of containment zones declared	Number of Rabies cases confined and containment zones established	State Animal Husbandry Department outbreak reports
8. IEC	Raise awareness on responsible dog ownership among citizens	% population / household aware of responsible dog ownership	KAP survey	Survey report
9. Surveillance	Strengthening surveillance of Animal Rabies	% of Animal Rabies cases captured by surveillance system Proportion of the outbreaks responded to in time	Surveillance system evaluation report / Records review	State Animal Husbandry Department reports (web portal)

Other Process Indicators:

Activities	Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
10.Advocacy, Communication and Social Mobilization	Measuring public awareness about the risk of Rabies and prevention of dog-bite	% of population aware of Rabies, prevention and control	KAP survey	KAP survey results
11.Inter-Sectoral Coordination	Assess level of partnerships and multi-sectoral collaboration among ministries, other government agencies, NGOs and private sectors for implementation of the NAPRE	Proportion of identified stakeholders onboard in Joint Monitoring committees and joint taskforces constituted by States	Number of stakeholders attending periodic review meetings	Monitoring Reports

12.Resource Mobilization	Assessment of Resources to support the Rabies elimination activities	Budget for Rabies prevention and control provided in human component	Approved budget and record of budget allocation	State Health Department Financial Report
	Assessment of Resources to support the Rabies elimination activities	Budget for Animal ARV, Trainings, IECs provided in Animal Component	Approved budget and record of budget allocation	State & National Animal Husbandry Dept reports / SAPRE operational plan document
		Numbers of partners involved in the project	Budget report	NRCP Annual report
13. Operational Research	To invite development partners/agencies to participate and manage aspects of the project	% of applicable studies done	Study reports	Dissemination of results Manuscript
	Conduct studies to examine operational feasibility and effectiveness for modified regimen for Rabies post exposure prophylaxis	Number of studies done	Study reports	Dissemination of results Manuscript
	Conduct studies for estimating the coverage of ARV and ARS and compliance of the vaccination	Number of studies done	Study reports	Dissemination of results Manuscript
	Conduct molecular epidemiological studies of Lyssa viruses circulating in animals in India	Number of studies done	Study reports	Dissemination of results Manuscript

Output/Outcome indicators:

These indicators are to assess the overall impact of the activities undertaken under NAPRE and to see the progress towards the ultimate goal of achieving zero human deaths due to dog-mediated Rabies by 2030 (Reduction to below 1% of the incidence of Rabies in humans as well as in animals). The outcome target and indicators thereof are described as under:

Outcome Target Indicators:

Technical Indicator	Objectively Verifiable Indicator(s)	Means of Verification	Source of Information
To progressively reduce and ultimately eliminate human Rabies in India through sustained, mass dog vaccination and appropriate post-exposure treatment	No. of states who has Rabies as notifiable diseases in Human & Animal	Publication / Amendment through the State Public Health / State Disaster act/ Epidemic Act Gazette	State Gazette
	% Decrease in Rabies in Humans	Monthly /quarterly/ Yearly Surveillance records	Annual Reports, Surveillance Reports
	% Decrease in Rabies in Animals	Surveillance records	Annual reports, Surveillance Reports

(19)

GOVERNMENT OF NAGALAND
HEALTH AND FAMILY WELFARE DEPARTMENT
NAGALAND: KOHIMA.

HFW-17/B-2/RAB/2014 **Dated Kohima the 2nd th March 2022**

NOTIFICATION

1. In the interest of the public health, to ensure early and effective implementation of containment and preventive measures, and to ensure early diagnosis & case management of Human Rabies, the Government of Nagaland in exercise of the power conferred by Section 10 of Nagaland Health Care Establishments Act 1997, and section 2 of the Epidemic Disease Act, 1897, hereby declare Human Rabies a Notifiable Disease. The Notification will come into force from the date of publication in Official Gazette.

2. It shall be mandatory for all government and private health facilities including medical colleges to report all suspected, probable and confirmed Human Rabies cases. The following information regarding all such cases shall be provided to the District Surveillance Officer by fastest means possible by the concerned Health Care Establishment.
   - Human Rabies Case Name*
   - Age*
   - Sex*
   - Address*
   - Biting Animal (Dog/Cat/ Monkey/ any other specify)
   - Date(s) of bite/scratch
   - Geographical (Location) of biting event(s)
   - 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 precede mortality)

3. A suspected/probable/confirmed case should be notified via email to National Nodal officer Rabies and District and State Nodal Officer in complete standard format (at Annexure-I) to nrcp.ncdc@gmail.com and nissu.idsp@nic.in and through IHIP Platform.

4. The District Surveillance Officer shall;
   (i) Complete the Rabies case investigation form
   (ii) In suspected case
   If possible, collect samples ante-mortem (e.g saliva, skin, CSF, serum) and post- mortem (brain tissue) for laboratory.
   Conduct Verbal Autopsy to collect a case history for the patient
   (iii) In probable case
   Identify contacts of patients and or animal involved for follow up
   (iv) Ensure mechanism is in place for Transportation of Samples to reference laboratory
   (v) Ensure the Notification of Rabies case
   (vi) Investigate to identify the source of Infection
   (vii) Notify appropriate local authorities of a suspected rabid animal
   (viii) Trace other victims bitten by the same animal
   (ix) Ensuring the PEP to other victims
   (x) Activating Rapid Response team

5. The Clinical definition of Human Rabies Case (suspect/ probable/ lab confirm cases) is provided in the Guidance Document of Rabies as Notifiable Disease as formalized by the National Rabies Control Program.

6. Legal action will be taken against individuals or institutions non-compliant or found not following adequate measures or not informing about the cases to the competent authorities

Enclosed: Format for Human Rabies Notification.

Sd/- **AMARDEEP SINGH BHATIA, IAS**
Principal Secretary to the Government of Nagaland

HFW-17/B-2/RAB/2014 / 409 **Dated Kohima the** ~~30~~ **th March 2022**

Copy to:

1. The Commissioner & Secretary to Governor of Nagaland, Kohima.
2. The Principal Secretary to Chief Minister, Nagaland, Kohima.
3. The Sr. PS to Minister Health & Family Welfare, Nagaland, Kohima.
4. The Deputy Secretary to Chief Secretary, Nagaland, Kohima.
5. All AHoD/HoD to the Government of Nagaland.
6. All Deputy Commissioners/ Additional Deputy Commissioners, Nagaland.
7 All Chief Medical Officers, Nagaland, with request to kindly bring this Notification to the notice of all concerned for compliance in their respective district immediately.
8. The Publisher, Nagaland Gazette, for publication in the extraordinary Gazette.
9. Office copy.

30/03/22

(KHONTHUNGO LOTHA)
Deputy Secretary to the Government of Nagaland.

Format for Human Rabies Notification

Date: DD/MM/YYYY

Name of Health Facility:

Complete Address of Health Facility:

District State: Pin Code:

Name of reporting health Professional:

Name of Patient*	
Age*	
Sex (M/F/TG)*	
Address*	
Biting Animal (Dog/Cat/ Monkey/ any other specify) *	
Date(s) of bite/scratch	
Geographical Address of biting event(s)	
Category of Bite: (I/II/III)	
PEP (Yes/No/DK);	
Immunoglobulin (Yes/No/DK)	
Case Definition*: Suspect/ Probable/ Laboratory Confirmed	
Date of Diagnosis	
Method of Diagnosis**	
Date ofDeath (if applicable; in some cases notification may precede mortality)	

(* Mandatory Field, ** Mandatory if notifying facility is Laboratory)

National Rabies Control Program
ANIMAL BITE EXPOSURE REGISTER

Name of the Health Facility:

Type of Health Facility:

Address & Contact Details
Health Facility Code:

Reporting Month **Year**

Any Clustering of cases Observed: if yes write the details

Registration		Type of Patient (New/OLD)	Patient Detail				Exposure History			Exposure details		Post Exposure Prophylaxis			Previous History of ARV Vaccination (Complete/ partial/NA)	Biting Animal Status after 10 days (Dead/ Alive/ Not traceable)	Remarks (Dose and PEP status complete/ incomplete)
S/No	Date		Name	Age	Sex (M/ F/ Other)	Residentially Address	Date of Bite	Site of Bite on Body: (Extremities s/ Trunk/Head- Neck Face/ Back)	Biting Animal Species - dog/ cat/ monkey / others-specify (Stray Dog / Pet Dog)	Category of Bite (II/III)	Address where bite incident took place	Adequate Washing of Bite wound Done (Y/N)	Rabies Immunoglobin Given (Y/N)	ARV Route ID/IM			

Category I: Touching or feeding of animals; Licks on intact skin; Contact of intact skin with secretions / excretions of rabid animal / human case, **Category II:** Nibbling of uncovered skin; Minor scratches or abrasions without bleeding. **Category III:** Single or multiple transdermal bites or scratches, licks on broken skin; Contamination of mucous membrane with saliva (i.e. licks)

*To be maintained by Health facility providing treatment to animal bite cases Summary

Indicator	Old Cases	New cases		Total
Total Number of Patients attended				
Category wise Number of patients	Cat I	Cat II	Cat III	

Indicator	IM	ID
Route of ARV Administration		
Total Number of Cat III patients receiving ARS		

Playdate SCARRS(Pg-80)

National Centre for Disease Control
Ministry of Health & Family Welfare, Govt. of India

State Monthly Report (NRCP-M02) *

State Name	
Name of State Nodal Officer	
Office Address	
Reporting Month & Year	

Detailed Monthly report: -

Total districts in the state		
Total No. of health facilities providing animal bite management in the state		
Total No. of facilities submitted monthly report under NRCP		
Mention total no. of patients as per type of biting animal-		
• Dog	Bite by Stray dogs	
	Bite by Pet dogs	
• Cat		
• Monkey		
• Others		
Mention no. of patients as per Category of bite		
Category -I (Touching or feeding of animals, Licks on intact skin Contact of intact skin with secretions /excretions of rabid animal/human case)		
Category -II (Nibbling of uncovered skin, Minor scratches or abrasions without bleeding)		
Category -III (Single or multiple transdermal bites or scratches, licks on broken skin Contamination of mucous membrane with saliva i.e. licks)		
Total number of patients as per route of rabies vaccination-		
IM route (Essen schedule on day (0,3,7,14,28)		
ID route (update Thai Red Cross Regimen (2-2-2-0-2)		
No. of Category III victims given ARS		
Number of Patients completed PEP		
Suspected/ Probable/ Confirmed Rabies cases/ Deaths reported by all the districts -		
No. of human rabies deaths confirmed by laboratory tests		
No. of clinically suspected rabies cases seen at OPD &		

Emergency (who refused admission)			
No. of clinically suspect rabies cases admitted in the health facilities			
No. of clinically suspected rabies cases left against medical advice (after admission)			
No. of clinically suspect rabies deaths in Hospital			
Status of Anti Rabies Vaccine (ARV) used by all the districts in the month (no. of vials)			
Opening balance			
Quantity received			
Quantity utilized			
Closing balance			
Shortage of ARV - Yes/No (If Yes, please mention in Vials or Doses)			
Status of Anti Rabies Serum (ARS) used by all the districts in the month (no. of vials)-			
Opening balance			
Quantity received			
Quantity utilized			
Closing balance			
Shortage of ARS - Yes/No (If Yes, please mention in Vials or Doses)			
Status of availability of Rabies Vaccine in the state (Health facility wise)-	**Total no. of health facilities**	**Availability of ARV**	**Availability of ARS**
DH			
SDH			
CHC			
PHC			
Information on Rabies and Animal Bite cases shared with State Veterinary Officer/department or concerned Department			
Any Clustering of Animal Bite Cases observed? If yes write the details including locality			
Any other remarks			

Date:

Name & Sign of State Nodal Officer-NRCP or Concerned officer

**Compiled Monthly report of Animal Bite Victims receiving treatment at all Anti Rabies Clinics/Health facilities providing animal bite management (To be submitted by State Nodal Officer to NRCP division, NCDC Delhi before 5th day of every month)*

AEFI CASE REPORTING FORM (CRF)

AEFI reporting ID: IND (AEFI) /__ST_/DIS_/_YR _/_NUM_ (to be allotted by DIO)

Section A (To be submitted by MO within 24 hours of case notification to DIO)

State	**District**
Block/ward	**Village/urban area**

Name of reporting MO (person filling this form):	Today's date:
Posted at: Designation:	Time of preparing this form: a.m./p.m.
Contact phone number: email:	Date case visited and examined/interviewed: __ __/__ __/__ __ __ __
Notified by (name): Date notified to MO: __ __/__ __/__ __ __ __	Designation (please circle): health worker/government doctor/private practitioner/community/media/others (specify) _____ _____

Patient's name																										

Date of birth DD/MM/YYYY	**Age** (in months): _____ months	**Sex**	Male / Female

Mother's name																										
Father's name																										

Complete address of the case with landmarks *(street name, house number, village, block, tehsil, pin no., telephone no.)*

P	i	n	-							P	h	o	n	e	-											

Date of vaccination: __ __/__ __/__ __ __ __ Time of vaccination: __ __: __ __a.m./p.m.	Address of session site:
Session: Routine (including SIW)* **Campaign** (SIA)-IPPI/MR/JE/others (specify):_____ Other _____	**Place of vaccination:** govt health facility/outreach/private health facility/others ____

Names of vaccines received (write vaccine & diluent details in separate rows)	Dose no. (zero/first/second/etc. as applicable)	Name of manufacturer	Batch/lot No.	Expiry date	Date of opening of vial	Time of opening the vial (for reconstituted vaccine)	No. of OTHER beneficiaries who received vaccine from the SAME vial in this session

Date of first symptom	D	D	M	M	Y	Y	Y	Y	Time of first symptom	H	H	M	M	a.m.	p.m.
Hospitalization: No/yes – (Date)	D	D	M	M	Y	Y	Y	Y	Time of hospitalization	H	H	M	M	a.m.	p.m.

Name and address of hospital (if hospitalized):

*Special immunization week

Current status (encircle)	Death/still hospitalized/recovered & discharged with sequelae/recovered completely and discharged/left against medical advice (LAMA)/not hospitalized																	
If died, date of death	D	D	M	M	Y	Y	Y	Y	Time of death	H	H	M	M	a.m.		p.m		
Post mortem done? Yes/no/unknown If yes, then write date post mortem done	D	D	M	M	Y	Y	Y	Y	If not done, but planned, write date planned	H	H	M	M	Y	Y	Y	Y	

Describe AEFI (signs and symptoms):

Suspected adverse event(s) (tick at least one):

☐ Severe local reaction ☐ Seizures
- ○ *>3 days*
- ○ *beyond nearest joint*
- ○ *febrile*
- ○ *afebrile*

☐ Abscess ☐ Sepsis ☐ Encephalopathy ☐ Toxic shock syndrome ☐ Thrombocytopenia ☐ Anaphylaxis ☐ Intussusception

☐ Fever≥39 °C (102 °F) ☐ Hypotonic hyporesponsive episode (HHE) ☐ Acute flaccid paralysis ☐ Sudden unexplained death syndrome

☐ Death due to any reason other than above – specify.....

☐ Hospitalization due to any reason other than above – specify..... ☐ Disability

☐ Cluster – is this case part of a cluster? Yes/no/unknown

If Yes, no of other cases in the cluster _____ (use separate form for each case in a cluster)

Signature and name of reporting medical officer:

Section B: District immunization office to complete and forward to state and national level within 24 hours of receiving the above information

Date case reporting form received at the district: __ __/__ __/__ __ __ __

Proposed date of preliminary investigation: __ __/__ __/__ __ __ __

Remarks:

DIO/district nodal person *(officer forwarding this report)*

Name ..... Date.....Designation.....Mobile No.....

Landline (with STD code)..... Fax No. .....

email id..... Complete office address (with Pin code).....

.....

.....Signature/seal

To be sent to: State Immunization Officer & Deputy Commissioner (UIP),
Immunization Division of Govt of India, MoHFW,
Nirman Bhawan, New Delhi – 110108.
Fax: 011-23062728 **email**: aefiindia@gmail.com

Date report received at state level – __ __/__ __/__ __ __ __

Remarks:

Section C: National level to complete

Date report received at national level – __ __/__ __/__ __ __ __

Remarks:

PRELIMINARY CASE INVESTIGATION FORM

AEFI reporting ID: IND (AEFI) /__ST_/DIS_/_YR _/_NUM_ (To be allotted by DIO)

Section A Basic details

State	**District**
Block/ward	**Village/urban area**

Place of vaccination: Govt health facility/outreach/private health facility/others (specify) ____

Session: Routine (including SIW) Campaign (SIA)-IPPI/MR/JE/others (specify):_____

Other _____

Name of investigator:	Date case visited and investigated: __ __/__ __/__ __ __ __
Posted at: Designation:	Date of preparing this form:__ __/__ __/__ __ __ __ Time of preparing this form: _____ a.m./p.m. This report is ☐ Preliminary ☐ Final
Contact phone number: email:	

Patient's name																														

Date of Birth DD/MM/YYYY Age (in months): _____ months Sex: Male / Female

Mother's name																														
Father's name																														

Complete address of the case with landmarks *(Street name, house number, village, block, Tehsil, PIN No., Telephone No.)*

P	i	n	-							P	h	o	n	e	-															

Date of vaccination: __ __/__ __/__ __ __ __ Time of vaccination: __ __: __ __ a.m./p.m.	Address of session site:
Date first notified to government health system: __ __/__ __/__ __ __ __	Notified by (please circle): Health worker/government doctor/private doctor/community/media/others (specify) _____

Name of vaccines received (write vaccine & diluent details in separate rows)	Dose no. (zero/ first/ second, etc.)	Name of manufacturer	Batch/lot No.	Expiry date	Date of opening of vial	Time of opening the vial (in case of reconstituted vaccines)	No. of OTHER beneficiaries who received vaccine from SAME vial in this session

Date of first symptom	D	D	M	M	Y	Y	Y	Y	Time of first symptom	H	H	M	M	a.m.	p.m.
Date of key symptom	D	D	M	M	Y	Y	Y	Y	Time of key symptom	H	H	M	M	a.m.	p.m.
Hospitalization No/Yes – Date	D	D	M	M	Y	Y	Y	Y	Time of hospitalization	H	H	M	M	a.m.	p.m.
Name and address of hospital (if hospitalized):															

Current status (encircle)	Death/still hospitalized/recovered & discharged with sequelae/ recovered completely and discharged/left against medical advice (LAMA)/not hospitalized																
If died, date of death	D	D	M	M	Y	Y	Y	Y	Time of death	H	H	M	M	a.m.		p.m.	
Post mortem done? Yes/no/unknown If yes, then write date post mortem done	D	D	M	M	Y	Y	Y	Y	If not done, but planned, write date planned	H	H	M	M	Y	Y	Y	Y

Section B Relevant patient information prior to immunization

Criteria	Finding	Remarks (If "Yes" provide details)
Past history of similar event	Yes/No/UK	
Adverse event after previous vaccination (s)	Yes/No/UK	
History of vaccine, drug or food allergy	Yes/No/UK	
Pre-existing illness (past 30 days)	Yes/No/UK	
Congenital disorder	Yes/No/UK	
History of hospitalization in past 30 days with reasons (in remarks column)	Yes/No/UK	
Was the patient on any concomitant medication at the time of AEFI? (If yes, name the drug, indication, doses & treatment dates – write in remarks column)	Yes/No/UK	
Family history of any disease (relevant to AEFI) or allergy	Yes/No/UK	

If patient is an adult woman
- Currently pregnant? Yes; Weeks _____/No/UK
- Currently breastfeeding? Yes/No

If patient is an infant, birth details	Any birth complication (specify)
1. Birth weight:	
2. Duration of pregnancy ☐ Full term ☐ Premature ☐ Postdated	
3. Place of birth ☐ Home delivery ☐ Institutional	
4. Delivery procedure ☐ Normal ☐ Caesarian ☐ Assisted	

Section C Details of first examination** of reported AEFI case

Source of information (✔ *all that* apply): ☐ Examination by the investigator ☐ Medical case records ☐ Verbal autopsy ☐ Other_____ If from verbal autopsy, please mention relationship with the deceased_____

In case of sudden unexplained death, please also fill SUD verbal autopsy form as per the guidelines)

Name of the person who first examined/treated the patient_____
Name of other persons from whom care was sought _____
Other sources who provided information (specify)_____

Signs and symptoms (in chronological order from the time of vaccination)

****Instructions** – Attach copies of ALL available documents (including case sheet, discharge summary, case notes, lab and autopsy reports) and then complete additional information NOT AVAILABLE in existing documents, i.e. • ***If patient has taken medical care*** – attach copies of all available documents (including case sheet, discharge summary, laboratory reports and post mortem reports, if available) and write only information unavailable in the attached documents below • ***If patient has not taken medical care*** – obtain history, examine the patient and write down your findings below (add additional sheets as required)		
Name of person filling up clinical details given below:	Designation:	Date/time

Consciousness	Alert/Drowsy/Unconscious/Other (specify)_____ Describe:
Vitals	Pulse Temperature Respiratory rate BP Weight
Skin	Rash/Cyanosis/Petechiae/Pallor/Jaundice/Others (specify)_____ Describe:
Eyes	Vision: Normal/impaired Pupil: Normal/Constricted/Dilated/Reacting to light
Hearing, speech	Normal/Impaired: Describe Normal/Abnormal: Describe
Neck	Neck stiffness: Present/Absent
Chest	Auscultation Normal/Crepts/Rhonchi Heart sounds Normal/Murmur (describe)
Respiration	Normal/Cough/Shortness Of Breath/Others (specify)_____ Describe:
GI	Pain abdomen/Vomiting/Diarrhoea/Dysentery/Others (specify)_____ Describe:
Abdomen	Normal/distended/tender Liver: Not palpable/Palpable (If palpable specify size) Spleen: Not palpable/Palpable (If palpable specify size) Describe:
Limbs	Tone • Upper limbs: Normal/Increased /Decreased • Lower limbs: Normal/Increased /Decreased Reflexes

	• Biceps Normal/Increased /Decreased/Absent • Triceps Normal/Increased /Decreased/Absent • Supinator Normal/Increased /Decreased/Absent Plantar Extensor/Flexor
Any other abnormal signs	
Treatment provided	
Provisional diagnosis	

Section D	**Details of vaccines provided on vaccination day at the site linked to AEFI**												
Number immunized for each vaccine at session site. Attach record if available.	Vaccine name												
	No of doses administered												

1.	When was the patient immunized? (✔ the ☐ below and respond to ALL questions)		
	☐ Within the first vaccinations of the session ☐ Within the last vaccinations of the session ☐ Unknown		
2.	In case of multi-dose vials, was the vaccine given – ☐Within the first few doses of the vial administered ☐ Within the last doses of the vial administered ☐Unknown		
3.	**Based on your investigation, is it possible that:** *(Please provide explanation for any "yes" answer in the remark column)*		
A	There was an error in prescribing or non-adherence to recommendations for use of this vaccine?	Yes/No/Unable to assess	Remark
B	The vaccine (ingredients) administered could have been unsterile?	Yes/No/Unable to assess	Remark
C	The vaccine's physical condition (colour, turbidity, foreign substances) was abnormal at the time of administration?	Yes/No/Unable to assess	Remark
D	There was an error in vaccine reconstitution/preparation by the vaccinator (wrong product, wrong diluent, improper mixing, improper syringe filling)?	Yes/No/Unable to assess	Remark
E	There was an error in vaccine handling (break in cold chain during transport, storage and/or immunization session)?	Yes/No/Unable to assess	Remark
F	The vaccine was administered incorrectly (wrong dose, site or route of administration, wrong needle size, not following good injection practice)?	Yes/No/Unable to assess	Remark

4. Number immunized from the concerned vaccine vial/ampoule in this session	
5. Number immunized from the concerned vaccine vial/ampoule since vial was opened (in case of open vial policy)	
6. Number immunized with the concerned vaccine having the same batch number in other locations. Specify locations _____	
7. **Is this case a part of a cluster?**	Yes/No/UK
A If yes, how many other cases have been detected in the cluster?	
B Did all the cases in the cluster receive vaccine from the same vial?	Yes/No/UK
C If no, number of vials used in the cluster	

Section E Immunization practices at the place(s) where concerned vaccine was used
(fill up this section by asking and/or observing practice)

Syringes and needles used:

• Are AD syringes used for immunization?	Yes/No/UK

If "No", specify the type of syringes used: ☐Glass ☐Disposable ☐Recycled disposable ☐Other _____

Specific key findings/additional observations and comments:

Reconstitution: (complete only if applicable, ✓ NA if not applicable)

	Status		
• Reconstitution procedure (✓)			
Same reconstitution syringe used for multiple vials of same vaccine?	Yes	No	NA
Same reconstitution syringe used for reconstituting different vaccines?	Yes	No	NA
Separate reconstitution syringe for each vaccine vial?	Yes	No	NA
Separate reconstitution syringe for each vaccination?	Yes	No	NA
• Are the vaccines and diluents used the same as recommended by the manufacturer?	Yes	No	NA

Specific key findings/additional observations and comments:

Section F Cold chain and transport
(fill up this section by asking and/or observing practice)

Last vaccine storage point:	
• Is the temperature of the vaccine storage refrigerator monitored?	Yes/No
○ If, "Yes", has there been any deviation outside of 2–8 °C after the vaccine was placed inside?	Yes/No
○ If, "Yes", provide details of monitoring separately:	
• Is the correct procedure of storing vaccines, diluents and syringes being followed?	Yes/No/UK
• Any other item (other than EPI vaccines and diluents) in the refrigerator or freezer?	Yes/No/UK
• Are partially used reconstituted vaccines stored in the refrigerator?	Yes/No/UK
• Unusable vaccines (expired, no label, VVM stage 3 & 4, frozen) in the refrigerator?	Yes/No/UK
• Unusable diluents (expired, manufacturer not matched, cracked, dirty ampoule) in the store?	Yes/No/UK
Specific key findings/additional observations and comments:	
Vaccine transportation:	

• Type of vaccine carrier used	
• Vaccine carrier sent to the site on the same day of vaccination?	Yes/No/UK
• Vaccination carrier returned from the site on the same day of vaccination?	Yes/No/UK
• Conditioned ice pack used?	Yes/No/UK
Specific key findings/additional observations and comments:	

Section G Community investigation (please visit locality and interview parents/others)

Any similar events reported recently in the locality? Yes/No/UK
If "Yes", describe:

If "Yes", how many events/episodes?

Of those affected, how many are
- Vaccinated:_____
- Not Vaccinated:_____
- Unknown:_____

Other comments:

Section H Other findings/observations/comments

Section I District AEFI committee review & investigation report

a. Was the case discussed by the district AEFI committee? *If "Yes", then date case discussed by district AEFI committee*	Yes	No
	D D M M Y Y Y Y	
b. *What was the provisional diagnosis of the case concluded by the district AEFI committee?*		
c. Did the district AEFI committee recommend that samples be sent for testing?	Yes	No

Details of vaccine/diluent samples sent to CDL Kasauli

Vaccine/diluent name	Site of collection	Used vial/amp quantity	Batch no, lot no, date of expiry	Date sent	Unused vial/amp quantity	Batch no, lot no, date of expiry	Date sent

Details of syringe/needle samples sent to CDL Kolkata								
Type of syringes	Quantity	Site of collection	Batch no, lot no, date of expiry	Date sent	Type of needles	Quantity	Batch no, lot no, date of expiry	Date sent
a) Any biological product (CSF, blood, urine) sent for testing? *If "Yes", specify details of the lab; attach copy of report if available* *Note: for AEFI resulting within 28 days following JE vaccine, send sample of CSF, serum to nearest NIV lab in Pune or Gorakhpur*							Yes	No
b) Was the local drug inspector involved in collecting additional samples?							Yes	No
c) Specify any other relevant investigation done and attach reports.								

Attached copies of reports/documents with this case investigation report:

Ser No.	List of document copies received	Availability *(encircle)*	Remarks (if any)
1.	Case reporting form (CRF)	Yes/No	
2.	Post mortem report *(in case of death)*	Yes/No	
3.	Verbal autopsy form (in case of sudden unexplained death)	Yes/No	
4.	**Any pathology/microbiology test report**		
4A	Blood test report	Yes/No	
4B	CSF report	Yes/No	
4C	Urine test report	Yes/No	
5.	Doctor's prescription/treatment record for AEFI	Yes/No	
6.	Doctor's prescription/treatment record for other illness	Yes/No	
7.	Laboratory result of vaccine (if sent for testing)	Yes/No	
8.	Laboratory result of syringes/other drugs (if sent for testing)	Yes/No	
9.	Any other document relevant to case	Yes/No	

District AEFI committee that conducted the investigation			
Name	Designation	Phone #	Signature
1.			
2.			
3.			
4.			

5.			
6.			
7.			

Section J **DIO/district nodal person** ***(Officer forwarding this report)***

Name ……. Designation……..…Date of submission to state/national level……

Mobile No……..…….. Landline (with STD code)…….…… Fax No. ……

email id……. Complete office address (with Pin code)……..

……..…

……Signature and seal……. Date……

Please ensure that this preliminary investigation form reaches within 10 days of notification to:
1.State Immunization Officer
2. Deputy commissioner, Immunization Division of Govt. of India, MoHFW, Nirman Bhawan, New Delhi–110108.
(Fax: 011 23062728. email: aefiindia@gmail.com)

FINAL CASE INVESTIGATION FORM

AEFI reporting ID: IND (AEFI) /__ST_/DIS_/_YR _/_NUM_ (To be allotted by DIO)

Section A

State	**District**
Block/ward	**Village/urban area**
Place of vaccination: Govt health facility/outreach/private health facility/other ____	
Session: Routine (including SIW) Campaign (SIA)-IPPI/MR/JE/others (specify):_____ Other _____	
Name of investigator:	Date case visited and investigated: __ __/__ __/__ __ __ __
Posted at: Designation:	Date of preparing this form:__ __/__ __/__ __ __ __ Time of preparing this form: _____ a.m./p.m. This report is ☐ Preliminary ☐ Final
Contact phone number: email:	

Patient's name			
Date of birth DD/MM/YYYY	Age (in months): _____ months	Sex	Male / Female
Mother's name			
Father's name			

Complete address of the case with landmarks *(street name, house number, village, block, tehsil, Pin no., telephone no.)*

P i n - P h o n e -

Attached copies of reports/documents with the final case investigation report:

Sl	List of document copies received	Availability *(encircle)*	Remarks (if any)
1	Case reporting form (CRF)	Yes/No	
2.	Preliminary case investigation form	Yes/No	
3	Any pathology/microbiology test report		
3a	Blood test report	Yes/No	
3b	CSF report	Yes/No	
3c	Urine test report	Yes/No	
4	Doctor's prescription/treatment record for AEFI	Yes/No	
5	Doctor's prescription/treatment record for other illness	Yes/No	
6	Laboratory result of vaccine (if sent for testing)	Yes/No	
7	Verbal autopsy form (in case of reported sudden unexplained death)	Yes/ No	
8	Post mortem report (based on guidelines for autopsy in case of reported unexplained death)	Yes/No	
9	Laboratory result of syringes/other drugs (if sent for testing)	Yes/No	
10	Any other document relevant to case	Yes/No	

Date of Vaccination: __ __/__ __/__ __ __ __ Time of Vaccination: __ __: __ __ a.m./p.m.	Address of session site:
Date first notified to government health system: __ __/__ __/__ __ __ __	Notified by (please circle): Health worker/government doctor/private doctor/community/media/others (specify) _____

Date of first symptom	D	D	M	M	Y	Y	Y	Y	Time of first symptom	H	H	M	M	a.m.		p.m.
Date of key symptom	D	D	M	M	Y	Y	Y	Y	Time of key symptom	H	H	M	M	a.m.		p.m.
Hospitalization No/Yes – Date	D	D	M	M	Y	Y	Y	Y	Time of hospitalization	H	H	M	M	a.m.		p.m.

Name and address of hospital (if hospitalized):

Current status (encircle)	**Death/still hospitalized/recovered & discharged with sequelae / recovered completely and discharged/left against medical advice (LAMA)/not hospitalized**

If died, date of death	D	D	M	M	Y	Y	Y	Y	Time of death	H	H	M	M	a.m.		p.m.		
Postmortem done? YES/No/Unknown If yes, then give date postmortem done	D	D	M	M	Y	Y	Y	Y	If not done, but planned, give date planned	H	H	M	M	Y	Y	Y	Y	

SECTION B: Refer to CRF, PCIF and updated information available for writing the case summary. Remember to include the following points, add additional sheet as necessary

Relevant information prior to immunization:

Status of immunization on the day AEFI reported (completed doses before the event):

Vaccines administered on the day of the event:

Post immunization event:

Examination findings:
Laboratory findings:
Details of community investigation, if conducted:
Any other findings:
Treatment provided:
Post mortem report if available:
Provisional diagnosis:

Add additional pages if needed

SECTION C:

Report of vaccine/diluent samples sent to CDL Kasauli as per details mentioned below

Vaccine/diluent name	Used vial/amp quantity	Batch No, lot No, date of expiry	Date sent	Lab finding	Unused vial/amp quantity	Batch No, lot No, date of expiry	Date sent	Lab finding

Report of syringe/needle samples sent to CDL Kolkata as per details mentioned below

Type of Syringes	Quantity	Batch No, Lot No, date of expiry	Date Sent	Lab finding	Type of needles	Quantity	Batch No, Lot No, date of expiry	Date Sent	Lab finding

Any biological product (CSF, blood, urine) sent for testing? *If yes, specify details of the lab; attach copy of report if available* *Note: For AEFI resulting within 28 days following JE vaccine, send sample of CSF, serum to nearest NIV lab in Pune or Gorakhpur.*	Yes	No	**Lab finding**
Specify any other relevant investigations done and attach reports			

District AEFI committee meeting when case was discussed

Name	Designation	Phone #	Signature
1.			
2.			
3.			
4.			
5.			
6.			
7.			

Section D **DIO/district nodal person *(Officer forwarding this report)***

Name …… Designation……..…Date of submission to state/national level……

Mobile No……..…… Landline (with STD code)……..…… Fax No. ……

email id…… Complete office address (with Pin code)……..

……..…

……Signature and seal……. Date……

Please ensure that this investigation form reaches within 70 days of notification to:

1.State Immunization Officer

2. Deputy commissioner, Immunization Division of Govt of India, MoHFW, Nirman Bhawan, New Delhi – 110108. (Fax: 011 23062728. email: aefiindia@gmail.com)

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

INVESTIGATION FORM FOR SUSPECTED HUMAN RABIES CASE

1. Information about the interviewer

Name of interviewer		Date of Interview	
Designation		Start Date	
Contact		End Date	

2. Information about patient

Name of Patient		Sex		Age (Years)	

Occupation

Level of education

☐ Illiterate ☐ Primary School ☐ Graduate ☐ Professional Degree
☐ Below Primary ☐ Secondary School ☐ Post graduate ☐ Unknown
☐ Other (Specify)

Is the patient Immunocompromised?

3. Information about respondent

Name of respondent		Age of respondent			
Contact information		State		District	
City/Locality		Village		Pincode	

To the main respondent:

What was your relationship to [deceased's name]?

☐ Parent ☐ Sibling ☐ Parent-in-law ☐ Community leader
☐ Husband/wife ☐ Child ☐ Friend or neighbour ☐ Son-in-law/daughter-in-law
☐ Health care worker (facility name): ☐ Other(specify):

4. Exposure (during previous 12 months)

Did any family pets or livestock die during 12 months before the patient's illness?

☐ Yes (Date of death) ☐ No ☐ Unknown

Did (deceased) have any contact with animal (bites, scratch, lick) within 12 months before the illness that led to death?

☐ Yes ☐ No ☐ Unknown

If yes, please describe the animal contact events

4.1 On what date did (deceased) have contact with this animal? ---/-----/-------

4.2 What type of animal?

☐ Dog ☐ Cat ☐ Livestock ☐ Other (Specify)

4.3 Place of exposure?

4.4 Was the animal owned?

☐ Owned by deceased ☐ Owned by community ☐ Not Owned ☐ Wild ☐ Unknown

Owner Name and Address:

4.5 Did the animal have any signs of disease (describe)?

☐ Aggression ☐ Paralysis ☐ Biting ☐ Hyper Salivation
☐ Lethargy ☐ Other

4.6 Is the animal alive today? (If no, estimate date of death?)

☐ Yes ☐ Unknown ☐ No (Date of death)

4.7 Was the animal observed for at least 10 days after the exposure?

☐ Yes, alive after 10 days ☐ Yes, died during observation ☐ No ☐ Unknown

Nagaland SOAPRE (Pg-97)

4.8 Was the animal tested for Rabies?

☐ Yes, Rabies Positive ☐ Yes, Rabies Negative ☐ No ☐ Unknown

4.9 Brain sent for Testing?	☐ Yes:	(Date of death)	☐ No	☐ Unknown

4.10 Was the deceased bitten by this animal?

☐ Yes ☐ No ☐ Unknown

4.11 Was the animal vaccinated?

☐ Yes ☐ No ☐ Unknown

4.12 Did the deceased have other contact with the animal (i.e. licked, scratched)?

☐ Category of Bite I	Touching or feeding of animals, Licks on intact skin. Contact of intact skin with secretions /excretions of rabid animal/human case.
☐ Category of Bite II	Nibbling of uncovered skin. Minor scratches or abrasions without bleeding.
☐ Category of Bite III	Single or multiple transdermal bites or scratches, licks on broken skin. Contamination of mucous membrane with saliva (i.e. licks).

4.13 Location of Bite on Body?

☐ Head ☐ Trunk ☐ Upper Limb ☐ Hands ☐ Lower Limb ☐ Genitalia

4.14 What treatment did the patient receive after this contact with the Animal?

☐ Washed the wound ☐ Sought medical care

☐ Neural tissue contact with open wound/mucous membrane ☐ Other

4.14 What treatment did the patient receive for this contact?

☐ Washed the wound ☐ Sought medical care ☐ Received rabies vaccination

NOTE:

5. Details on Animal Bite Management

5.1 Did (deceased's name) receive treatment after the animal exposure above?

☐ Yes ☐ No ☐ Don't Know

5.2 Was any of this treatment received at home?

☐ Wound Washing ☐ Over the counter medications ☐ Traditional medicines

☐ Unknown ☐ Other

5.3 Where did (deceased's name) go for medical care for any of the exposures listed above?

	Facility 1	**Facility 2**	**Facility 3**
Facility Type	☐ Traditional Healer ☐ Registered Medical Practitioner	☐ Traditional Healer ☐ Registered Medical Practitioner	☐ Traditional Healer ☐ Registered Medical Practitioner
Facility Name			
Facility Location			
Date(s) visited	1: --/--/---- 2: --/--/---- 3. --/--/----	1: --/--/---- 2: --/--/---- 3. --/--/----	1: --/--/---- 2: --/--/---- 3. --/--/----
-Antibiotics/Tetanus -Rabies Vaccine - Rabies Immunoglobin -Specify If Other			

5.4 Reason for Incomplete PEP?

☐ Animal well after observation period ☐ Animal results negative ☐ Specify if other:

☐ Victim previously immunized ☐ Victim refused further doses

☐ Lost to follow-up ☐ Referred out of province

5.5 If the patient received rabies vaccination, please record the type of vaccine and dates received:

☐ Cell Culture Vaccine i. No. of injections ii. Date started --/--/----

CCV	Vaccine 1	Vaccine 2	Vaccine 3	Vaccine 4	Vaccine 5
Date					

Nagaland SOAPRE (Pg-98)

Route (IM or ID)					
Site					

5.6 RIG received or not? ☐ Yes --/--/---- ☐ No ☐ Unknown

5.7 Had the patient ever been vaccinated against rabies prior to this exposure? If Yes mention details.

☐ Yes: Year of Vaccination --/--/---- ☐ No ☐ Unknown

6. Signs and Symptoms related to Rabies

6.1 Time from onset of death

Symptom	Yes	No	Unknown	Symptom	Yes	No	Unknown
Fever	☐	☐	☐	Malaise	☐	☐	☐
Headache	☐	☐	☐	Nausea	☐	☐	☐
Vomiting	☐	☐	☐	Anxiety	☐	☐	☐
Muscle spasm	☐	☐	☐	Dysphasia	☐	☐	☐
Anorexia	☐	☐	☐	Ataxia	☐	☐	☐
Priapism	☐	☐	☐	Seizures	☐	☐	☐
Aerophobia	☐	☐	☐	Hydrophobia	☐	☐	☐
Localized weakness	☐	☐	☐	Localized pain	☐	☐	☐
Confusion	☐	☐	☐	Delirium	☐	☐	☐
Agitation	☐	☐	☐	Aggressiveness	☐	☐	☐
Autonomic instability	☐	☐	☐	Hyperactivity	☐	☐	☐
Insomnia	☐	☐	☐	Hypersalivation	☐	☐	☐

6.1.1 When did the illness that led to death begin?

Day_____Month_____Year_____ ☐ Unknown

6.1.2 If you don't remember the exact date, approximately how long did the illness begin?

Day_____Month_____Year_____ ☐ Unknown

6.1.3 How many days after onset of the illness did (deceased's name) die?

Number (estimate if needed):

6.2 During the illness did (deceased's name) seek medical assistance?

☐ Yes: (Date): --/--/---- ☐ No ☐ Unknown

6.3 During the illness was (deceased's name) admitted to a hospital?

☐ Yes: (Date): --/--/---- ☐ No ☐ Unknown

6.4 Whether any specific test (ELISA/PCR/FAT/MAT/MRI/Other) performed for Lab confirmation of Rabies

Name of Test performed	Date	Result	Comment

6.5 What was the date of (deceased's name) death? Day_____Month_____Year_____

6.6 Where did (deceased's name) die?

☐Home ☐ Hospital (specify)

☐ Other health facility (specify) ☐Other (specify)

6.7 Did anyone else in the community develop an illness similar to (deceased's name) within the past 12 months? (If "Yes", collect contact information for other suspected cases to initiate verbal autopsy of additional cases.)

☐Yes ☐ No ☐ Unknown

If yes, please describe:

7. Post-mortem information

7.1 Post mortem report available (if any):

☐ Yes ☐ No ☐ Unknown

7.2 Death certificate available? ☐Yes ☐ No ☐ Unknown

7.2.1 Did (deceased's name) have any evidence of recent wounds?	☐ Yes	☐ No	☐ Unknown
7.2.2 Did (deceased's name) have any evidence of healed wounds?	☐ Yes	☐ No	☐ Unknown

8. Contact investigation

8.1 Collect the names and contact information for any mentioned below who had contact with the suspected rabies case in the 14 days or before symptom onset until death.

	☐ Family	☐ Community members	☐ Hospital workers	☐ Any Other
Name				
Address				
Contact Number				

8.2 Collect the names and contact information for any people who had contact with the **animal suspected** of transmitting rabies to the case. Including details of Animal owners.
Risk assessments should be conducted with these people to rule out potential exposure.

	Name and Address	Relation
1		
2		
3		

8.3 Final Impression:

Information guide enumerators in deciding on the likelihood of human rabies

Human exposure to rabies

Possible exposure: A person who had close contact (usually a bite or scratch) with a rabies-susceptible animal in (or originating from) a rabies-infected area **(question 4).**

Probable exposure: A person who had close contact (usually a bite or scratch) with an animal displaying clinical signs consistent with rabies at time of the exposure or within 10 days following exposure in a rabies-infected area **(questions 4.4, 4.5, 4.6)**.

Confirmed exposure: A person who had close contact (usually a bite or scratch) with a laboratory-confirmed rabid animal **(question 4.7)**.

Please submit the form to:

National Rabies Control Programme (NRCP)
National Centre for Disease Control (NCDC)
(Directorate General of Health Services)
Ministry of Health & Family Welfare
Government of India

Address 22, Sham Nath Marg, Delhi-110054, India
Email: nrcp.ncdc@gmail.com
Telephone Number:011-23930178

Nagaland SOAPRE (Pg-100)

National Rabies Control Program (NRCP)
Directorate General of Health Services
Ministry of Health & Family Welfare, GOI

Data sharing format for Rabies and Dogbite cases to intersectoral Department		
Name of the state		
Name of District		
Reporting Month		
Name of District Nodal Officer (DNO)		
Contact No of DNO		
Report submitted to (name of concerned department & district)		
Summary of the Rabies and Dog bite cases in the month		
1	Total Number of Reported Dog Bite Cases	
2	Total Number of Confirmed Human Rabies Cases	
3	Total Number of Suspected Human Rabies Cases	
4	Total Number of Confirmed Rabies Deaths (Human)	
5	Type of Dog Bite (in number)	
	• *Pet dogs bite*	
	• *Stay dogs bite*	
6	Area wise dog bite cases	
	• *Dog bite reported in rural area*	
	• *Dog bite reported in urban area*	
7	District Nodal officer's remarks on Geographical Clustering of Dogbite event and action required by concerned department (Veterinary Dept/ State-AWBI/ PRI/ Municipal Corporation)	
8	Any other information	

Date:

Signature of the reporting officer-

Constitution of Joint Steering Committee at the State level

The State Action Plan for Rabies Elimination will be formalized by the Joint Steering Committee at the State Level.

Term of reference:

The committee will be responsible for the monitoring of all the collaborative activities of the State Action Plan for Rabies Elimination (SAP-RE). The committee will monitor the uninterrupted supply of logistics required for the execution of the plan. The committee will also ensure and facilitate the integration, cooperation, collaboration and Communications required among stakeholders at all level for successful implementation of the SAP-RE with One Health Approach. The proposed constitution of the joint steering Committee at the State level is as under-

State Joint Steering Committee for Rabies Elimination	
Chief Secretary, State Government	Chair
Secretary of State Public Health Dept	Co-chair
Secretary of State Animal Husbandry Dept	Co-chair
State NHM, Mission Director of State Public Health Dept	Member
Commissioner/Directorate of State Public Health Dept	Member
State Animal Husbandry Commissioner/Director of State Animal Husbandry Dept	Member
Secretary, State Animal Welfare Board of India	Member
Secretary of State Department of Environment, Forest & Climate Change	Member
Secretary of State Department of Housing and Urban Affairs,	Member
Secretary of State Department of Drinking Water & Sanitation	Member
Secretary of State Department of Panchayati Raj	Member
State Department of Environment, Forest & Climate Change	Member
Director of Department of Housing and Urban Affairs,	Member
Director of Department of Drinking Water & Sanitation	Member
Director of Department of Human Resources	Member
Director of Department of Panchayati Raj	Member
Director of Department of Information and Broadcasting,	Member
Representative of Civic Bodies involved in Rabies control	Member
Representatives of NGOs	Member
Vice Chancellor of University of Agriculture, Veterinary and Animal Sciences University	Member
Vice Chancellor of Health Sciences University	Member
Principal Chief Conservator of Forest (Head of Forest Force) or equivalent Officer	Member
State Nodal Officer of NRCP, H&FW	Member Secretary

Constitution of Joint Steering Committee at the District Level

Like the State Level Steering Committee, Districts Level Steering Committee will be formed in districts.

It may be noted that the State and the Districts have State and District Level Surveillance Committees. These Committees comprise of same members as the Joint Steering Committee at the district level and those not there can be co-opted as required.

Term of reference

Districts Level Steering Committee will coordinate among stakeholders for the implementation of the plan at the district level. Districts Level Steering Committee will review and evaluate the progress at the district level. The constitution is as under:

District Joint Steering Committee for Rabies Elimination	
Chief District Magistrate / Collector	Chair
Chief District Medical Officer/ Civil Surgeon	Co-Chair
Chief District Veterinary Officer/Deputy Director (AH)	Co-Chair
Representative Urban Local Governments (Municipality Corporations /Councils)	Member
Representative Rural Local Governments (Panchayati Raj Institutions)	Member
Representative faculty Medical and Veterinary College	Member
Representative NGO/ AWO	Member
District Forrest Officer/ Head of Forrest	Member
District Nodal Officer at NRCP and designated District Veterinary Officer at DAHD	Member Secretary

NATIONAL HEALTH MISSION | DIRECTORATE OF HEALTH & FAMILY WELFARE, NAGALAND

Prevent Rabies, Vaccinate To Save Lives

After Dog Bite or Scratches or Licks

STEP 1 Wound Management for Category I, II & III

- Wash all wounds under running water with soap for upto 15 minutes.
- Apply Antiseptic

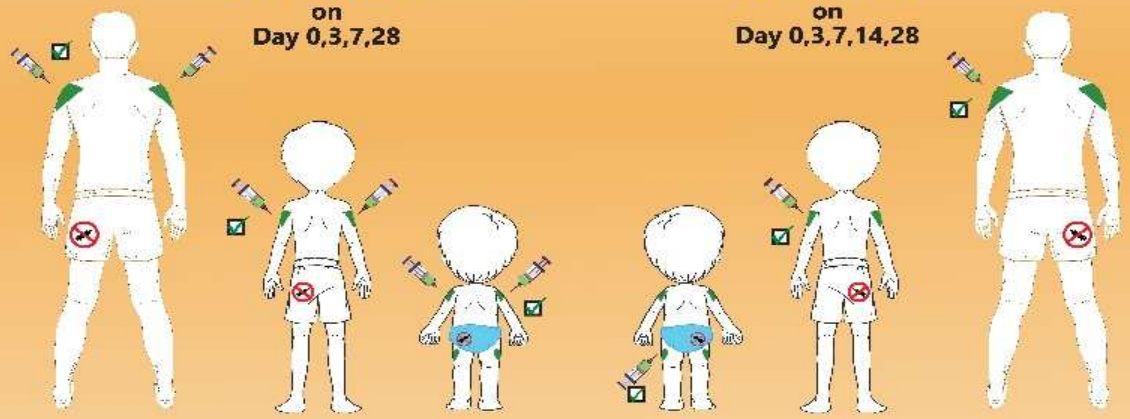
STEP 2 Vaccinate for Category II & III

Intradermal Route

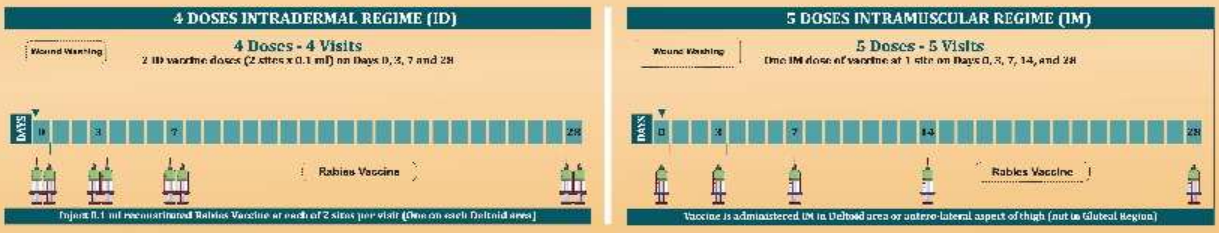
0.1 ml at 2 Sites on Day 0,3,7,28

Intramuscular Route

1 vial at 1 Site on Day 0,3,7,14,28



Do not inject Rabies Vaccine in Gluteal Region



Step 3: Infiltrate (RIG) in Category III

Infiltrate Rabies Immunoglobulin in all wounds.

Hoardings have been put up in all 17 (Seventeen) Districts

NATIONAL HEALTH MISSION | DIRECTORATE OF HALTH & FAMILY WELFARE | NAGALAND

PROTOCOL FOR RABIES POST EXPOSURE PROPHYLAXIS AFTER ANIMAL BITE

DECISION TO TREAT

CATEGORY I
- Touching or feeding of animals
- Licks on intact skin

CATEGORY II
- Nibbling of uncovered skin
- Minor scratches or abrasions without bleeding

CATEGORY III
- Single or multiple transdermal bites or scratches.
- Licks on broken skin.
- Contamination of mucous membrane with saliva.

Gently wash all scratches or wounds with with mild soap and running water for atleast "15 minutes" Irrespective of exposure category to decrease viral load

No prophylaxis needed (if reliable contact history is available)

ONLY RABIES VACCINATION

RABIES VACCINATION + RIG INFILTRATION

*All categories of bite should be reported in NRCP monthly report.

POST EXPOSURE PROPHYLAXIS PROTOCOL

CATEGORY I

No prophylaxis needed (if reliable contact history is available)

CATEGORY II

PREVIOUSLY NOT IMMUNISED

RIG IS NOT INDICATED

IMMUNE COMPETENT PERSON

Give 04 doses OF RABIES VACCINE via intradermal route - ID (0.1 ml 2 sites) on day 0 - 3 - 7 - 28

OR

Give 05 doses OF RABIES VACCINE via intramuscular route- IM (1 vial, 1 site) on day 0 - 3 - 7 - 14 - 28

PREVIOUSLY* IMMUNISED

RIG IS NOT INDICATED**

IMMUNE COMPETENT PERSON

Give 02 doses OF RABIES VACCINE via intradermal route - ID (0.1 ml 1 site) on day 0 - 3

OR

Give 02 doses OF RABIES VACCINE via intramuscular route- IM (1 vial, 1 site) on day 0 - 3

CATEGORY III

PREVIOUSLY NOT IMMUNISED

INFILTRATE WOUNDS WITH RIG AS SOON AS POSSIBLE

IMMUNE COMPETENT PERSON

Give 04 doses OF RABIES VACCINE via intradermal route - ID (0.1 ml 2 sites) on day 0 - 3 - 7 - 28

OR

Give 05 doses OF RABIES VACCINE via intramuscular route- IM (1 vial, 1 site) on day 0 - 3 - 7 - 14 - 28

Rabies vaccine should be administered in deltoid muscles for adult and children & in anterolateral thigh for infants and small children. Rabies vaccine should not be injected in the glutoal region

FOR IMMUNE COMPROMISED PERSON
- Proper wound management followed by local infiltration of RIG in both category II and III exposures
- After this, complete course of Rabies vaccine via Intramuscular route in both category II and III exposures should be undertaken

*Previously Immunised Case: Animal bite patient who can document previous history of complete post exposure or pre exposure prophylaxis by modern vaccines.

FOR CATEGORY II & III, IF REPEAT EXPOSURES IN THE FUTURE, TREAT AS PREVIOUSLY IMMUNIZED AND FOLLOW THE ALGORITHM AS ABOVE

RABIES IMUNOGLOBULIN - RIG DOSAGE

- The maximum dosage for HRIG is 20 IU/Kg of the body weight and that of ERIG is 40 IU/Kg of bodyweight.
- The entire imunoglobulin dose or as much as anatomically feasible but possibly avoiding compartment syndrome, should be carefully infiltrated into or as close as possible to the wound(s) or exposure site.
- Do not give RIG beyond the 7th day after the 1st vaccine dose on day 0.
- **In previously vaccinated individual/s where direct nerve exposure is suspected treating physician may consider RIG infiltration

*NRCP ADVOCATES INTRADERMAL ROUTE FOR RABIES VACCINE ADMINISTRATION

NATIONAL RABIES CONTROL PROGRAMME

ADOPT ONE HEALTH, STOP RABIES

'National Rabies Control Program'

Centre for One Health

National Centre for Disease Control, MoHFW, Delhi

Dog Bite Protocols for Schoolchildren

1. Do not try to pet or touch the dog, especially if you don't know the dog or its temperament.
2. If the dog loses interest or backs away, you can slowly and cautiously back away from the dog. Keep facing the dog but avoid turning your back on it.
3. If a dog bites you, try to stay as calm as possible. Avoid screaming or making loud noises, as this can startle the dog further.
4. Stand still like a tree with your arms at your sides. Avoid making sudden movements or running away, as this can trigger the dog's chase instinct.
5. Do not make direct eye contact with the dog, as some dogs may interpret this as a threat or challenge.
6. Shouting or yelling can agitate the dog further. Speak softly and calmly if you need to communicate with others nearby.
7. Always ask for permission with the dog owner, parents before approaching or petting a dog, especially if it's a dog they don't know.
8. Avoid Disturbing Dogs that are eating or sleeping
9. Protect Your Face and Neck: If the dog is jumping or lunging, protect your face and neck by keeping your hands and arms close to your body.
10. If you have been bitten and there is an open wound, wash it gently with soap and warm water for at least five minutes. This helps reduce the risk of infection.
11. After the dog has moved away, find an adult you trust and inform them about the situation. They can help you with any injuries and report the incident to the dog's owner or local authorities if necessary.
12. Even if the bite seems minor, it's important to seek medical attention. Dog bites can lead to infections and other complications.
13. Always tell your parents, teachers and elders if any dog has scratched you or bitten you.

National Rabies Control Program (NRCP)

TIPS TO PREVENT DOG BITES

KEEP AWAY FROM THE DOG WHEN IT IS ANGRY OR SCARED.

It will show its teeth when angry.

It's tail will be between its legs and it will try to run away when it is scared.

DO NOT DISTURB OR FRIGHTEN THE DOG

when it is eating, feeding its puppies, playing with its toys, asleep or ill.

DON'T MOVE IF A DOG APPROACHS YOU WHEN IT IS NOT LEASHED.

Stand still like a tree trunk.
If you fall over, curl up and stay as still and heavy as a rock.

APPROACH THE DOG SLOWLY AND QUIETLY.

Ask the owner or your parents/guardian's permission before you touch a dog. Let it sniff your hand before you touch it. When you stroke it, stroke its back first.

IF A DOG BITES YOU ACT QUICKLY.

Wash the wound with soap and water and look for a first aid centre. Remember to tell your parents that you were bitten. Tell them which dog it was and where you were when it bit you.

NATIONAL HEALTH MISSION | DIRECTORATE OF HEALTH & FAMILY WELFARE, NAGALAND

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परिवार कल्याण मंत्रालय
MINISTRY OF
HEALTH AND
FAMILY WELFARE
सत्यमेव जयते

NATIONAL HEALTH MISSION
NAGALAND

UNITY
GOVERNMENT OF NAGALAND

National Rabies Control Programme
Adopt One Health • Stop Rabies

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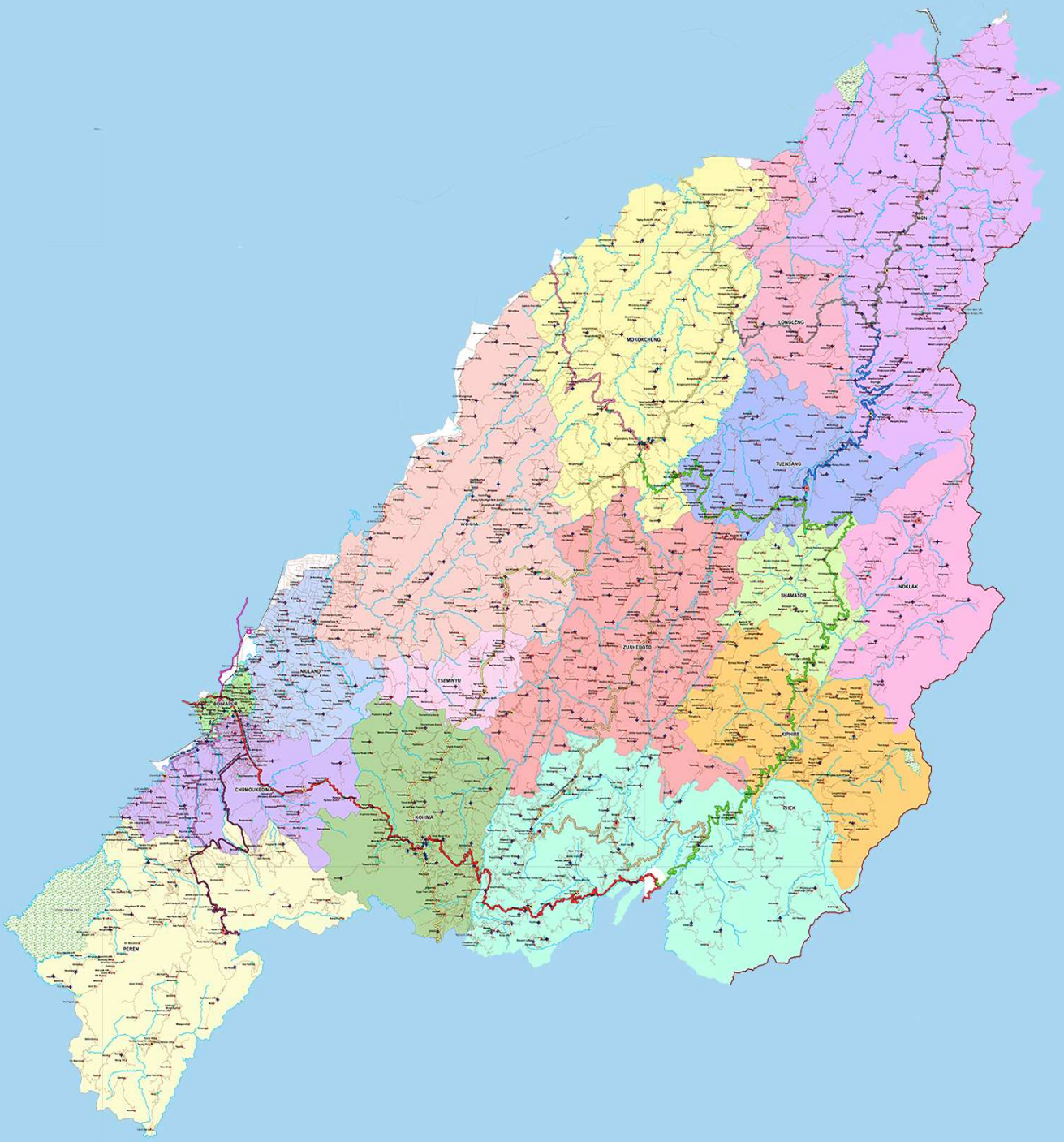
NATIONAL CENTRE FOR DISEASE CONTROL DELHI
दिल्ली ११००५४



National Rabies Control Program

Adopt One Health, Stop Rabies