

## RABIES - THE SILENT KILLER: WE MUST STOP TOGETHER

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Rabies is one of the oldest and most deadly viral infectious diseases known to humans. It affects the central nervous system, particularly the brain. It spreads to humans primarily through the bite or scratch of an infected animal, most commonly dogs. The disease is almost always fatal once symptoms appear but it is also entirely preventable with timely action (World Health Organization [WHO], 2023).

Globally, rabies kills an estimated 59,000 people annually, with over 95% of human deaths occurring in Asia and Africa (WHO, 2023). In India, approximately 20,000 rabies deaths are reported every year, the highest of any country (GARC, 2022).

Despite these grim statistics, most rabies deaths are entirely preventable through timely wound care and vaccination after exposure, mass dog vaccination campaigns and public education and awareness.

World Rabies Day (WRD) is observed each year on September 28, promoted by the Global Alliance for Rabies Control to raise awareness of the consequences of human and animal rabies and how to prevent it. The date honors Louis Pasteur, who produced the first anti-rabies vaccine.

The theme for World Rabies Day 2025, is "Act Now: You, Me, Community". **You** can learn the signs and respond to bites quickly. **Me** as an individual can vaccinate pets and raise awareness. **Community** means governments, schools, veterinarians, and families working together to eliminate rabies.

This theme emphasizes the shared responsibility in eliminating rabies and encourages both individual and collective action to prevent the spread of dog-mediated rabies. It also highlights the importance of working together to achieve rabies-free

communities. It encourages everyone to participate in the fight against rabies and contribute to its prevention and eventual elimination.

Over 99% of human rabies cases are linked to dog bites (WHO, 2023). That makes dog vaccination the most effective strategy in breaking the chain of transmission. Some regions, such as Goa, India, have already demonstrated success. Between 2018 and 2020, Goa reported zero human deaths from dog-mediated rabies, thanks to coordinated mass dog vaccination programs and accessible post-bite care (GARC, 2020).

In India, the rabies crisis has been persistent and by and large overlooked. The ground reality is even more discouraging when it is considered that rabies is preventable and curable if timely and appropriate treatment is made available. Recent studies by the ICMR-NIE have shown that in India there are more than 9 million animal bite cases annually, with rural populations and children are disproportionately affected.

A growing stray dog population both in urban and rural habitats worsens the situation. In 2024 alone over 2.1 million dog bite cases were reported across various Indian states. The rise is not incidental but it indicates a failure in tackling preventive measures such as animal birth control program, public pet vaccination efforts and proper waste management. Children under the age of 15 are more vulnerable representing a significant percentage of bite victims. Yet, many regions still lack effective community level interventions that could change these outcomes.

Most unfortunate is many of the bite victims are unable to complete the full post exposure prophylaxis (PEP) protocol. Around 80 per cent of those hardly receive one vaccine

dose instead of the 5 dose immunization schedule as recommended by the World Health Organization. Further non availability of rabies immunoglobulin (RIG) or monoclonal antibodies also remain a big concern.

Rabies is considered as One Health issue because it is associated with human, animal and environmental health. A collective approach comprising of veterinary health services, human health systems and environmental management is a need of an hour to deal with this grave problem.

Post- exposure prophylaxis involves thorough wound washing, administration of RIG or monoclonal antibodies where needed and a course of five doses for a complete course of anti-rabies vaccination. When appropriately applied post exposure treatment has a success rate of more than 99 per cent. The problem is no longer scientific but logistical, educational and political. Fortunately India has scientific innovation and manufacturing excellence to lead the global fight against rabies. However even the best tools become ineffective if they are not made available easily. Many rural and remote public health systems do not have essential rabies treatments. Health workers often lack training in managing bite injuries and that leaves people unaware of the importance of immediate wound care and timely vaccination.

According to the National Health Mission, around 20,000 people die of rabies every year in India, and dog bites are the biggest contributors to this. The course of rabies vaccine is usually of 4-5 doses, administered on days 0, 3, 7, 14 and 28. Timely vaccination can ensure cent percent protection, provided the course is complete and the vaccine used is of the same brand.

Many times patients get the first dose of a vaccine in a private hospital and subsequent doses in a government hospital, due to which the brand changes. It is considered that the composition of the vaccine of every brand is different. If the patient changes the brand in between, then adequate

and stable immunity is not developed in the body, due to which the risk of rabies remains.

The World Health Organization (WHO) also advises that the course of rabies vaccine should be completed with the same brand. If for any reason the brand has to be changed, then this should be done only on the advice of the doctor and in special circumstances. Experts say that changing the brand may reduce the effectiveness of the vaccine, and the patient may be advised to start the course again.

Unfortunately, In India Rabies is still not a notifiable disease in all states, hence it is difficult to plan and execute effective measures. Moreover, estimated 30 million stray dogs population in the country, most of them remain unvaccinated is a big concern.

The National Rabies Control Programme (NRCP) aims to eliminate human rabies deaths in India by 2030. The strategy focuses on training healthcare professionals, promoting cost- efficient intradermal vaccination methods, improving diagnostic infrastructure and raising community awareness. But these are just the first steps.

The roadmap to rabies elimination must also include widespread availability of RIG at all district and sub-district hospitals, large scale vaccination campaigns for stray and community dogs and integrated One Health coordination between human and animal health services.

States in India are taking the initiative to implement action plans focused on rabies eradication and humane stray dog management because dog-mediated rabies remains a serious public health concern. The aim is in line with India's National Action Plan for Dog-Mediated Rabies Elimination (NAPRE) commitment to the worldwide target of "Zero by 2030." launched in September 2021 by the Ministry of Health and Family Welfare (MoHFW) and the Ministry of Fisheries, Animal Husbandry, and Dairying (MoFAHD).

It outlines a comprehensive strategy to eliminate rabies in India through a "One Health" approach, focusing on both human

and animal health components. Human health is managed by the NCDC, this includes activities like rabies surveillance, strengthening diagnostic facilities, and ensuring the availability of post-exposure prophylaxis (PEP) for humans. Animal health is managed by the Department of Animal Husbandry and Dairying (DAHD), this component focuses on mass dog vaccination and managing the stray dog population through programs like the Animal Birth Control (Dogs) Rules, 2023.

Goa, which is a rabies controlled state, has successfully maintained zero human rabies deaths for several years (2017-2025) through a comprehensive strategy that includes mass dog vaccination campaigns, with 63,000 dogs vaccinated in a single month, focused sterilization drives, particularly in border regions, widespread public awareness efforts via rallies, school programs, and door-to-door education, border surveillance to stop the entry of unvaccinated dogs and a statewide maintenance scheme, Phase I (2023–2026) to sustain high vaccination coverage. This multi-pronged approach has positioned Goa as a leading example in rabies control in India

Kerala is focusing on both animals and human health through 70% dog vaccination targets, school-based awareness campaigns, Integrated Bite Case Management (ICBM) to link bite victims with rabies prevention, training for dog catchers and vaccinators, and expansion of anti-rabies diagnostic labs and mobile sterilization units.

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Rajasthan is the first Indian state to implement the Stray Animal Birth Control (ABC) Rules, 2023 fully emphasizing humane dog catching, dedicated feeding points for community dogs, setting up municipal sterilization and vaccination centers, Anti-Rabies clinics and surveillance units.

After facing nearly 150,000 dog bite cases in 2004, Assam launched a state action plan for rabies elimination 2030 including interdepartmental cooperation along with free anti-rabies vaccines and plan to increase sterilization capacity.

Several other states like Uttar Pradesh, Tamil Nadu, Maharashtra, Odisha, Delhi started different programs and strategies to sterilize dogs, vaccination, designated feeding points and post-exposure prophylaxis and bite case monitoring.

These diverse approaches ranging from vaccination and sterilization drives to public education and judicial mandates show India's increasing momentum towards rabies elimination and stray dog management through humane way .

Though Rabies is one of the oldest and most deadly infectious diseases known to mankind. Yet, it is also one of the most preventable. With vaccines, education, and collective action, a rabies-free future is within reach. So this **September 28**, let's remember the message: "**Act Now: You, Me, Community**" and take the steps needed to end rabies, once and for all.