

# World Rabies Day 2023 with Mass Vaccination and Population Control Activities by Veterinarians in Bali Province

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## abstract

Since the end of 2008, Bali as one of the provinces in Indonesia is facing the problem of rabies outbreak that until now has not been able to resolve completely, even their transmission is expanding. The Government have been made to overcome this problem; one of them is action of the dog vaccination. Although the government has acted but the results are not maximized, even rabies outbreaks tend is spreading. This is caused by the obstacles such as people are lack of awareness and knowledge of this case, which the population of dog's vaccination is still low, the habit of releasing dogs and high figure of the dog's birth. The lack of awareness and knowledge of the people about the rabies problem is due to still lack of public socialization about the rabies disease. During this time, the prevention of rabies disease is still regarded as the government's responsibility only, so that the active role of the society is not involved.

In Bali itself, rabies outbreak prevention system based on customary Village Society is one of the options according to the Balinese people's condition that still strong on the culture social life. A disease prevention effort with approaching of the social culture of the society is very important, where is in this system the government and rural communities and indigenous peoples work each other to implement the Communication, Information and Education program (IEC). This is aimed to keep the public informed so they can participate to implement the basic principles of animal welfare, such as; keep the dog well and do not release it away without treatment, carry out a rabies vaccination program to the dog; and perform sterilization and take care of them. Which of this things are obstacles encountered earlier in the prevention of rabies in the society. Another thing that worked was this involves the role of leaders indigenous villagers. Because as people who are respected in the traditional village, they are expected to able give the good and the right information then motivate the society to run the program that has been agreed, so the rabies prevention programs can working well in the society.

**Keywords:** Bali, Rabies, Animal Welfare, the Government, the Village Society.

## Introduction

Rabies is an acute infectious disease affecting the central nervous system that can attack humans and various animals. (1) Rabies is transmitted through bites or scratches from animals infected with the rabies virus. (2) In Indonesia, rabies is widespread in 18 provinces. Endemic region to rabies in Indonesia include Sumatra, West Java, Kalimantan, Sulawesi, and Flores. (3) Bali has been rabies-free for over 30 years. However, in November 2008, human deaths due to rabies were reported, leading to Bali being declared a rabies outbreak (KLB) area. (3,4)

The public perceives rabies eradication as the government's responsibility, thinking that only government or healthcare workers can handle it. Currently, people tend to see themselves as objects in various government-run programs. The community is involved only to assist existing activities, mostly limited to community leaders or figures. The current rabies eradication program tends to be top-down and not based on the needs, desires, and cultural values of the local community.

(5) According to the Bali Provincial Health Service, rabies in Bali is transmitted by dog bites. (4) Bali has a huge population of dogs, around 540,000 or 96 dogs/km<sup>2</sup>. Balinese people, who are predominantly Hindu, have myths about dogs, such as the Mahabharata story that mentions dogs as manifestations of Gods. (7) While dog ownership is a cultural tradition that should be preserved, neglecting it could pose a threat and act as a mediator for diseases like rabies. (5) Unlike rabies threats in other areas, the threat in Bali is specific due to its socio-cultural and bio-geographical uniqueness. Being densely populated, Bali is also densely populated with rabies-carrying animals. With such conditions, rabies control becomes a significant challenge requiring attention and collaboration from various parties.

## 1. Dog Maintenance in Bali

a. Myths about dogs: Dog ownership in Bali differs from other regions due to the absence of prohibitions from customary rules or religious teachings. Dog maintenance is influenced by ancestral customs of raising dogs through generations. Additionally, dog maintenance is influenced by myths and stories existing in the community. One of Mahabharata's story indicates that dogs are manifestations of Gods, a belief still held by the community.

b. Dog maintenance patterns: The goals of dog maintenance by the community include keeping them as guards for homes or gardens, companions, entertainment, hobbies, and lifestyle choices. There are also those who keep dogs for economic purposes by selling their puppies. Dogs usually do not receive proper healthcare such as vaccination and medical treatment. The presence of many stray dogs is closely related to dog maintenance practices. Unsterilized dogs, especially those that are not restrained, freely mate, especially with stray dogs on the streets. Puppies then grow up to become stray or street dogs.

## 2. Community Perception of Rabies

The community's perception of rabies is that infected dogs exhibit aggressive behavior, biting and chasing people without reason, refusing to eat, avoiding interaction with other dogs, ultimately leading to death. The community understands that vaccination prevents rabies transmission in dogs, but they are unaware of the correct vaccination procedures. Dog vaccination is only done when announced by the local community, and dogs are brought to receive free vaccinations. Vaccination activities are usually carried out by the government in collaboration with the local livestock department. Vaccinated dogs are given labels in the form of ribbons or collars.

## 3. Promotive and Preventive Actions Against Rabies

Rabies vaccination in dogs is an effort to prevent the transmission of rabies. (2) Vaccination is aimed at every dog at risk and residing in areas indicated to be susceptible to rabies. (2) The community does not vaccinate their dogs due to several reasons, such as the high cost of rabies vaccines, difficulty in obtaining them, and the inexpensive types of dogs not justifying the cost of care. (7) Free distribution of rabies vaccines is implemented as a preventive measure. (8,9,10) Free vaccination is carried out in areas suspected or indicated to be susceptible to rabies.

According to the community, dogs that receive vaccines are limited to the pets of residents, while stray dogs and unrestrained pets do not receive rabies vaccinations. Communities residing far from the community hall find it challenging to access dog vaccination due to distance, difficulty in capturing and bringing their dogs to the vaccination site. (9,11) Besides mass vaccination programs, controlling the population of stray dogs is crucial in the control and eradication of rabies. Vaccinating stray dogs is challenging due to the difficulty in capturing them, and their population grows uncontrollably. Therefore, a more serious approach to the population of stray dogs is necessary through mass sterilization, which can be implemented through the community or traditional village approach.

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