

Descriptive Analysis of Rabies Vaccination Implementation within One Health Framework in NTT

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Background

A total of 14 regencies in East Nusa Tenggara (NTT) still remain declared as rabies outbreak areas. The main obstacle in rabies control in endemic areas is the limited resources, such as insufficient vaccine to reach the entire at risk animal population. The One Health concept emphasizes the importance of cross-sector integration between human, health, animal health, and the environment to comprehensively address zoonotic diseases.

Objective

This study aims to describe the number of rabies transmitting animal bites, the number of deaths due to rabies, and the number of rabies vaccinations, which is one of the One Health's strategies in NTT.

Methods

This study used a quantitative design with a descriptive analytical approach based on secondary data from BPBD 2024. The data is presented with graph for a clear visualization, to facilitate the interpretation of the research's results

Results

Cases of rabies transmitting bites increased to 27,599 in 2024 and there was an increase in deaths from 35 cases in 2023 to 46 cases in 2024. In 2023, the number of vaccines administered was only 213,223 (33,8%) of the total vaccine stock of 629,925, while in 2024 only 239,859 (38%) were administered

Conclusion

The increase in rabies bite cases and death in 2024 indicates that the implementation of rabies vaccination for animals in NTT is not optimized yet. This highlights the need to strengthen rabies control strategies based on the One Health approach.

Reference

1. BPBD Provinsi Nusa Tenggara Timur. (2024). Dashboard Penanggulangan Darurat KLB Rabies Provinsi NTT [Data daring]. Layanan Repositori Pengetahuan dan Data Bencana NTT.
2. Kale M, Riwu A, et al. Applying the One Health Approach to Rabies Control in the Timor Archipelago, East Nusa Tenggara: A Literature Review on Epidemiology and Strategic Interventions. 2025;13(1):44–53
3. Chen, Q., Liu, Q., Gong, C. et al. Strategies to Interrupt Rabies Transmission for the Elimination Goal by 2030 In China (STRATEGIC): a modelling study. BMC Med 21, 100 (2023). <https://doi.org/10.1186/s12916-023-02821-x>
4. Yu Q, Liu J, Zhao H, Chen H, Xiang Y, Liu Q, et al. Canine rabies vaccination, surveillance and public awareness programme in Beijing, China, 2014–2024. Bull World Health Organ. 2025;103(4):247–54.
5. Ap triana CD, Sudarnika E, Basri C. Nationally and locally-initiated One Health approach in controlling rabies in West Kalimantan, Indonesia. Vet World. 2022 Dec;15(12):2953-2961. doi: 10.14202/vetworld.2022.2953-2961. Epub 2022 Dec 28. PMID: 36718315; PMCID: PMC9880830.