RABIES IN THE PHILIPPINES: CHALLENGES, INITIATIVES, AND WAYS FORWARD TOWARD ONE HEALTH APPROACH

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RABIES BY THE NUMBERS: GLOBAL



99.9% Rabies cases are fatal



96% Asia (60%) and Africa (36%); most human Rabies deaths



70% Dog population needs to be vaccinated to protect from Rabies



59,000 Rabies human deaths globally



95% Human deaths are due to dog bites



10% Cost of dog vaccine compared to human vaccines

0 50 100 200 km

ANIMAL RABIES

CASES IN THE

PHILIPPINES

(2019 - 2021)

Cartographer: Toni Rose M. Barroga, Kansas State Uni Data Source: Department of Agriculture Bureau of Animal Industry, Philippin September 2023

S-T-O-P APPROACH TOWARDS RABIES DISEASE CONTROL AND ELIMINATION



SOCIO CULTURAL

Facts on Rabies are included in the elementary curriculum of students to educate them about the disease. World Rabies Day and Rabies Awareness Month are organized to intensify knowledge on Rabies and responsible pet ownership.



TECHNICAL

Improved mass dog vaccination (MDV) is achieved through coordination with private stakeholders, academe, and health authorities. Capacity building on MDV and surveillance are also implemented to prevent Rabies occurrence.



References 1. Amparo, A. C., Jayme, S. I., Roces, M. C., Quizon, M. C., Quizon, M. C., Mercado, M. L., Dela Cruz, M. P., Licuan, D. A., Villalon, E. E., Baquilod, M. S., Hernandez, L. M., Taylor, L. H., & Nel, L. H. (2018). The evaluation of Animal Bite Treatment Centers in the Philippines from a patient perspective. PLOS ONE, 13(7). https://doi.org/10.1371/journal.pone.0200873 **2.** Bonquin, C. (2022). Ph rabies deaths jump to 233. cnn. http://www.cnnphilippines.com/news/2022/9/8/Rabies-deaths.html. Accessed on June 25, 2203 **3.** Bureau of Animal Industry. 2021. Laboratory Test Results of Rabies-positive animals (unpublished data) **4**. Hampson, K., Coudeville, L., Lembo, T., Sambo, M., Kieffer, A., Attlan, M., ... Dushoff, J. (2015). Estimating the global burden of endemic canine rabies. PLOS Neglected Tropical Diseases, 9(4). https://doi.org/10.1371/journal.pntd.0003709





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RABIES BY THE NUMBERS: PHILIPPINES 200-300 1043 Animal Rabies cases Human deaths every year for the past 3 years 99% **15 & UNDER** Dogs are the most common Most common age of reservoir of Rabies virus animal bite victims CHALLENGES Percent of Cases per Province • Availability of human and animal rabies vaccines 0.000 - 0.384 • Low vaccination rates 0.385 - 1.311 1.312 - 2.558 • Limited public awareness 2.559 - 5.275 • Weak coordination between human and animal health sectors 5.276 - 9.527

ORGANIZATIONAL

Improved coordination across relevant sectors (agriculture, health, local community leaders, private sectors) through regular meetings are regularly held to improve Rabies control efforts.



POLITICAL

Sustained budgetary support toward Rabies control activities can be materialized through the help of policy makers. Health and veterinary leaders communicate with their city leaders to achieve this.