The American Journal of Tropical Medicine and Hygiene www.ajtmh.org

doi: 10.4269/ajtmh.2011.10-0535 Am J Trop Med Hyg 2011 vol. 85 no. 1 138-145

Epidemiologic Trends of Rabies in Domestic Animals in Southern Thailand, 1994–2008

Anyarat Thiptara, Edward R. Atwill^{*}, Wandee Kongkaew and Bruno B. Chomel

- Author Affiliations

Department of Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, California; Epidemiology Section, Veterinary Research and Development Center (Southern Region), Thungsong, Nakhon-si-thammarat, Thailand

- Author Notes

Authors' addresses: Anyarat Thiptara, MPVM Program, School of Veterinary Medicine, University of California, 1 Shields Avenue, Davis, CA, and Epidemiology Section, Veterinary Research and Development Center (Southern Region), Teewang, Thungsong, Nakhon-si-thammarat 80000, Thailand, and Department of Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, CA, E-mails: thiptara9@yahoo.com, thiptara9@dld.go.th, and athiptara@ucdavis.edu. Edward R. Atwill, Department of Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, CA, E-mail: ratwill@ucdavis.edu. Wandee Kongkaew, PhD Program, Royal (Dick) School of Veterinary Studies, The University of Edinburgh, Edinburgh, United Kingdom and Epidemiology Section, Veterinary Research and Development Center (Southern Region), Teewang, Thungsong, Nakhon-si-thammarat 80000 Thailand, E-mails: w.kongkaew@sms.ed.ac.uk and k_wand18@yahoo.com. Bruno B. Chomel, Department of Population Health and Reproduction, School of Veterinary Medicine, University of California, Davis, CA, E-mail: bbchomel@ucdavis.edu.

→*Address correspondence to Edward R. Atwill, Department of Population Health and Reproduction, 2009 Haring Hall, School of Veterinary Medicine, University of California, 1 Shields Avenue, Davis, CA 95616. E-mail: ratwill@ucdavis.edu

.....

Abstract.

Rabies and associated risk factors in dogs, cats and cattle (n = 3,454) in southern Thailand during 1994–2008 were evaluated by using a mixed-effect logistic regression model. Overall prevalence was 48%. In dogs, odds of being rabid were 1.7 times higher in unvaccinated dogs than in vaccinated dogs and two times higher in dogs with bite history than in dogs with no known bite history. Similarly, aggressive dogs were more likely to be rabid than non-aggressive dogs. In cattle, aggression, pharyngeal paralysis, hyperactivity, and depression were clinical signs associated with being rabid. Annual fluctuations of the species-specific prevalence of rabies is suggestive of a positive correlation between canine and either feline (r = 0.60, P = 0.05) or bovine rabies (r = 0.78, P = 0.004). Insufficient vaccination coverage led to maintenance of rabies, which could be easily controlled by increased vaccine coverage and public education.

Footnotes

Financial support: This study supported by the Royal Thai government and the Master of Preventive Veterinary Medicine program at the University of

12/1/2555

Epidemiologic Trends of Rabies in Domestic Animals in Southern Thailan...

California at Davis, School of Veterinary Medicine.

Received September 23, 2010. Accepted April 4, 2011.

 $\ensuremath{\mathbb{C}}\xspace$ The American Society of Tropical Medicine and Hygiene