

Rabid Cats in Maryland 2009: An Epidemiologic Case Series

Kimberly C. Mitchell, MPH and Katherine A. Feldman, DVM, MPH

Maryland Department of Health and Mental Hygiene, Office of Infectious Disease Epidemiology and Outbreak Response
Center for Zoonotic and Vector-borne Diseases

ABSTRACT

Background: During 1945-1981, rabid cats were rarely reported in Maryland (annual average 0.4, range 0-6). Following the introduction of raccoon rabies in 1982, the average number of rabid cats has risen to 16 (range 2-28) annually. Cats are the most common rabid domestic animal, but a comprehensive description, including exposure circumstances and associated impacts, has not been done. We describe all confirmed rabid cats in Maryland in 2009 to better understand the epidemiology and impact of rabid cats in the state.

Methods: For all confirmed rabid cats, data were abstracted from the Maryland Rabid Animal Surveillance Report and the Report of Human Rabies Post-Exposure Treatment. Local health officials were interviewed to collect data not routinely captured.

Descriptive statistics were calculated for characteristics of the animals, victims, and exposures.

Results: In 2009, 1520 cats were submitted to the Maryland Department of Health and Mental Hygiene for rabies testing. Of those, 19 cats (1.3%) in 14 local jurisdictions were confirmed rabid, accounting for 5% of all reported rabid animals. The proportion of submitted cats confirmed positive varied across the 24 local health jurisdictions (range 0-11%). Most (15, 79%) rabid cats were stray, including two from feral cat colonies; approximately half were under one year of age. A total of 55 people were exposed to the 19 cats, with an average of three per cat (range 0-13). Veterinary and Animal Control personnel made up nearly 25% of all exposed and females accounted for 73%. A statistically significant association was demonstrated between rabies test result and whether humans were exposed to the cat ($\chi^2= 7.045$, $p<0.01$). Bites accounted for 1000 (66%) of all exposures to tested cats. Among rabid cats, bites accounted for 95% of exposures. Media alerts were used to identify exposed individuals after four (21%) cats were confirmed rabid.

Conclusion: While accounting for only a small proportion of rabid animals in the state, rabid cats have a significant impact.

These results illustrate the potential risks associated with handling stray cats and indicate a need for improved stray animal control, including feral cat colony management. They underscore recommendations for pre-exposure vaccination of high risk individuals to mitigate the impact of exposures to rabid animals.

- Nearly half of all the rabid cats in this study (8, 42%) were under one year of age
- Nine cats (47%) were one year or older
- The two remaining rabid cats had unknown age (11%)

- Thirteen (69%) of the 19 rabid cats described in this study had no known history of rabies vaccination
- One cat had a documented history of a single previous rabies vaccination in 2007
- The rabies vaccination status for the remaining five cats was unknown