

Leptospirosis Hotspots

J. Scott Weese, DVM, DVSc, DACVIM
University of Guelph

In the Literature

White A, Zambrana-Torrel C, Allen T, et al. Hotspots of canine leptospirosis in the United States of America. *Vet J.* 2017;222:29-35.

FROM THE PAGE ...

Leptospirosis has been considered a re-emerging disease in dogs in North America, but risk varies greatly across the continent. Understanding disease trends is important for patient assessment and management. A range of geographic, environmental, climatic, ecologic, and socioeconomic factors can impact disease risk.

Canine leptospirosis microscopic agglutination test results from 2000 to 2014 were obtained from a diagnostic laboratory. Dog population data were estimated for counties (based on state dog data and relative human population in the counties) so that dog density could be considered. Distribution of results was examined, as were 4 factors potentially associated with positivity: climate (temperature and rainfall), land cover type, rodent species ecology, and socioeconomic status (income and education) of the area.

Of 87 355 test results, 14.1% were positive. Positive results were identified in 40.5% of counties in the mainland United States, indicating that this is a widely disseminated disease. At the county level, the 10 counties with the highest likelihood for a positive result were located in Virginia (5 counties), West Virginia (2), Indiana (1), Kentucky (1), and Oregon (1). In these counties, likelihood of a test being positive ranged from 29% to 37%. Risk factors were harder to interpret in a clinical context but showed that climate and geography can impact risk both broadly and within regions.

Retrospective studies that use large databases with no clinical information have many inherent limitations and biases but can provide some interesting high-level information that can be used when thinking about differential diagnoses and when talking to pet owners about vaccination.

... TO YOUR PATIENTS

Key pearls to put into practice:

- 1** Leptospirosis is widely disseminated across the United States but is more prevalent in certain regions.
- 2** Risk maps, including one that was developed from this study, can be good educational tools for owners, particularly those who live in higher risk areas, to highlight risk and facilitate vaccination discussions.
- 3** Risk maps are also useful in assessing dogs that have traveled; travel, even over relatively short distances, can result in greater or lesser concern about leptospirosis in a sick patient.