



## **2021 Veterinary Advisory #7: Increase in Human Leptospirosis Cases in New York City**

- **Human cases of leptospirosis, while rarely reported in New York City, have been increasing over time**
- **Fifteen cases of human leptospirosis have been identified in 2021**
- **Reports of canine cases are lower than previous years, but may be due to a reporting bias**
- **Human and canine leptospirosis infections are largely associated with exposure to rats**

*Please share with your colleagues in Veterinary Medicine and your staff*

October 20, 2021

Dear Colleagues,

Fifteen people with leptospirosis have been reported to date in 2021; more than the total number of cases reported to the New York City (NYC) Health Department in a single prior year. Between 2006 and 2020 an average of 3 locally acquired human cases were reported annually in NYC. Most cases had a clear history or risk factor which exposed them to an environment with a severe rat infestation. See NYC [Health Advisory #35](#) for more information.

The NYC Health Department conducts active laboratory and passive veterinary surveillance for canine leptospirosis. While not reflected in canine surveillance data, the increase in human cases suggests dogs may also have an increased risk for infection. In 2021 to date, 15 canine leptospirosis cases have been reported, a decrease from the previous 4 years. Between 2006 and 2020, 269 cases (range 8-29 cases per year) of canine leptospirosis were reported to the Health Department from all five boroughs (Graph 1, Table 1).

Serovar information from microscopic agglutination tests (MAT) has been useful in identifying rodents as the main source of canine infections in past years. However, only one case in 2021 was positive by MAT; all other cases were positive primarily by polymerase chain reaction (PCR), and two by a point of care antibody test, neither of which offers serovar information. Interestingly, the proportion of hospitalized cases was higher in 2021 than in previous years (93% vs. 77% from 2017-2020) which suggests a large number of less severe infections occurred. We theorize that this year's decrease in canine cases may not be a true reduction but rather attributable to a change in testing practice where more in-house antibody testing is being performed and not reported.

The clinical signs of leptospirosis in dogs vary and are nonspecific. While some dogs do not have any signs, clinical illness can range from a mild febrile illness to severe renal and hepatic disease and coagulopathy, pulmonary hemorrhage, and sometimes death. The most commonly reported signs include fever, vomiting, abdominal pain, diarrhea, anorexia, weakness, depression, stiffness, muscle pain, and jaundice. Consider leptospirosis testing for any dogs with clinically compatible illness.

Confirmatory diagnosis usually requires collecting and testing both acute and convalescent serum specimens collected 1 to 2 weeks apart to show evidence of recent infection through rising or falling titers, or PCR on blood or urine. Point of care antibody tests have become more widely available and may aid in rapid diagnosis but should be considered in combination with MAT or PCR tests. Refer to the [2010 American](#)

[College of Veterinary Internal Medicine Small Animal Consensus Statement](#) on Leptospirosis for more information on diagnosis, treating and preventing canine leptospirosis.

No known human cases of leptospirosis have been associated with owning or caring for a dog diagnosed with leptospirosis since enhanced human leptospirosis surveillance began in NYC in 2006. However, given the zoonotic potential associated with leptospirosis, you should have in place protocols and procedures to manage dogs with suspected or confirmed leptospirosis. To minimize risk of transmission from an ill dog to a human, place signs on patient's cage, have staff handling the dog or cleaning the dog's cage wear personal protective equipment (i.e., gloves, disposable gown, eyewear/face mask), do not pressure wash animal cages, use a disinfectant solution that inactivates leptospires when cleaning (e.g., bleach, quaternary ammonium) and wash bedding with hot water and detergent.

### **Reportable Animal Diseases**

The following diseases are reportable to the NYC Health Department:

Upon laboratory diagnosis: Leptospirosis, psittacosis, Rocky Mountain spotted fever, salmonellosis, tuberculosis, arboviral encephalitides

Upon suspicion: Anthrax, brucellosis, rabies, tularemia, Q fever, glanders, monkeypox, plague, SARS (severe acute respiratory syndrome), novel influenza (with pandemic potential)

Contact: Bureau of Communicable Disease      Phone: 347-396-2600      Fax: 347-396-2753 or x8991

Please report animal diseases online using a [secure web-based reporting platform](#), by phone at 347-396-2600, or fax an Animal Disease Reporting Form to the Bureau of Communicable Disease:

<https://www1.nyc.gov/site/doh/providers/reporting-and-services/reporting-animal-diseases.page>

### **Resources**

Leptospirosis websites from [NYC Health Department](#) and [CDC](#)

Zoonotic and Vectorborne Disease Resources for veterinarians, including previous veterinary alerts:

<https://www1.nyc.gov/site/doh/providers/health-topics/zoonotic-and-vectorborne.page>

As always, we greatly appreciate your partnership and cooperation.

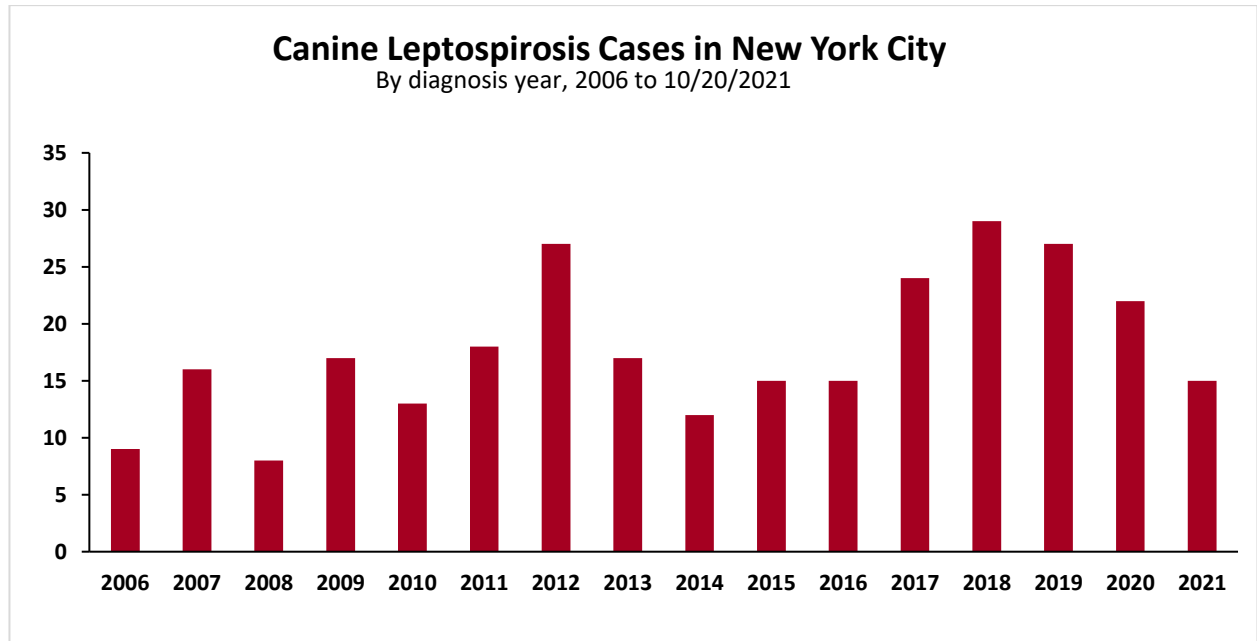
Sally Slavinski, DVM, MPH, DACVPM

Asha Abdool, MPH

Renee King, MPH

Zoonotic, Influenza and Vectorborne Disease Unit  
Bureau of Communicable Disease

**Graph 1. Canine Leptospirosis Cases in New York City by Diagnosis Year, 2006 to 10/20/2021**



**Table 1. Canine Leptospirosis Cases in New York City by Borough, 2010 to 10/20/2021**

Borough	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Total
Bronx	2	2	2	2	1	1	0	0	1	1	1	1	14
Brooklyn	3	8	5	4	5	6	6	14	11	10	8	6	86
Manhattan	6	8	13	8	3	4	4	4	5	4	6	4	69
Queens	1	0	4	1	3	4	2	2	5	10	7	3	42
Staten Island	1	0	3	1	0	0	3	3	6	1	0	1	19
NYC, Unknown	0	0	0	1	0	0	0	1	1	1	0	0	4
<b>Total</b>	<b>13</b>	<b>18</b>	<b>27</b>	<b>17</b>	<b>12</b>	<b>15</b>	<b>15</b>	<b>24</b>	<b>29</b>	<b>27</b>	<b>22</b>	<b>15</b>	<b>234</b>