NEW YORK CITY DEPARTMENT OF
HEALTH AND MENTAL HYGIENE
Mary T. Bassett, MD, MPH
Commissioner

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2017 Veterinary Advisory #1
Three Cases of Human Leptospirosis Identified In
One-Block Area of the Concourse section of the Bronx

- **Three cases of human leptospirosis have been identified over the past 2 months in a one-block section of the Concourse area of the Bronx**
- **Human leptospirosis cases are very rare in New York City and are associated with exposure to rats. Among dogs, an average of 20 cases are reported each year and are associated with rats and small mammals.**
- **Report all confirmed cases of canine leptospirosis to the New York City Health Department.**

Dear Colleagues,

Three cases of human leptospirosis have been reported over the past two months among persons whose exposure occurred within a one block section of the Concourse area of the Bronx. Human leptospirosis cases are very rare in New York City with an average of three cases reported annually; this is the first time a cluster of human cases has been identified. All three cases had severe illness and were hospitalized with acute renal and hepatic failure. Two cases developed pulmonary hemorrhage, and one died as a result of infection. The remaining two were discharged home. The New York City Health Department is working with building owners in the affected area to remediate rodent infestations.

Leptospirosis is a worldwide zoonotic disease caused by the spirochete bacteria of the genus and species *Leptospira interrogans*, which includes a number of pathogenic serovars. Infected animals may excrete the bacteria in their urine. Warm, moist environments that allow the bacteria to survive outside the host are associated with higher rates of disease, with cases occurring in both rural and urban settings. Dogs and humans can become infected through contact with urine from infected animals, or from water, soil, or food that has been contaminated with the urine of infected animals. The bacteria can enter the body through open wounds or mucous membranes.

In New York City, an average of 20 canine leptospirosis cases per year are reported. The most common infecting serovars among dogs are *L. icterohaemorrhagiae, L. bratislava,* and *L. grippotyphosa*. Risk factors for infection include seeing rodents, raccoons or other wildlife in the environment, and exposure to puddles of water. Leptospirosis transmission from dogs to humans is rare and has not been reported in NYC.

The clinical signs of leptospirosis in dogs vary and are nonspecific. While some dogs do not have any symptoms, the most commonly reported include: fever, vomiting, abdominal pain, diarrhea, anorexia, weakness, depression, stiffness, and muscle pain. In severe cases, dogs may have evidence of renal and hepatic failure, coagulopathy, and jaundice. Generally younger animals are more seriously affected than older animals.

The New York City Health Department reminds veterinarians to consider leptospirosis testing for any dogs with clinically compatible illness. Confirmation of suspect cases usually requires collecting and testing both acute and convalescent specimens collected 1 to 2 weeks apart to show evidence of recent infection through rising or falling titers. If you receive a positive result, either call or fax the results along with an animal disease report form to the Health Department.

Health Department staff will contact you and interview the owners of affected dogs to obtain information regarding potential exposures to leptospirosis. Questions will address a variety of issues including: contact with rodents, dogs and other animals; exposure to dog parks, city parks; and travel outside of New York City.

Prevention

Discuss with dog owners whether to vaccinate their dogs against leptospirosis. New multivalent vaccines provide yearly protection against four serovars: canicola, Icterohaemorrhagiae, pomona and grippotyphosa. These vaccines are less immunogenic than the older bivalent vaccines, which sometimes caused side-effects. The multivalent vaccines do not protect against other serovars and are therefore not 100% effective.

To help prevent transmission if you are treating an animal with suspected leptospirosis:

- Use protective equipment or clothing, such as gloves and face shields, and minimize contact with urine, vomit, blood and contaminated materials.
- Clean contaminated porous and non-porous surfaces with routine disinfectants, soaps, or other household cleaning products. The *Leptospira* bacterium is susceptible to even low concentrations of these products.
- Limit the number of staff members who have direct contact with the animal, its urine or its bedding.
- Post infection control signs for staff.
- Remind owners to use caution when handling the dog's urine, vomit, or blood, and wash hands.

Leptospirosis fact sheets for veterinarians and dog owners (in English, Spanish, Russian, and Chinese) are available on the NYC DOHMH website and copies may be ordered via 311:
http://www1.nyc.gov/assets/doh/downloads/pdf/zoo/lepto_providers.pdf
http://www1.nyc.gov/assets/doh/downloads/pdf/zoo/lepto_owners.pdf

Reportable Animal Diseases

As a reminder, the following diseases are reportable to DOHMH. Please use the Animal Disease Reporting Form, available at http://www1.nyc.gov/assets/doh/downloads/pdf/zoo/zoo-disease-report-form.pdf.

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

As always, we appreciate your partnership and cooperation.

Sincerely,

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