



NEW YORK CITY DEPARTMENT OF

HEALTH AND MENTAL HYGIENE

Mary T. Bassett, MD, MPH

Commissioner

2017 Alert #3: Leptospirosis Cluster in the Concourse area 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. Person-to-person transmission is rare.**
- **Report all suspected cases of human leptospirosis to the Health Department**

Please Distribute to All Clinical Staff in Internal Medicine, Primary Care, Infectious Diseases, Hepatology, Nephrology, Emergency Medicine, Intensive Care Family Medicine, Laboratory Medicine and Infection Control

February 14, 2017

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; this is the first time a cluster of 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 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*. Warm, moist environments are associated with higher rates of disease, with cases occurring in both rural and urban settings. Clinically, there is a wide spectrum of illness ranging from a mild febrile illness characterized by sudden onset of fever, and any of the following: headache, photophobia, conjunctival suffusion, nausea, vomiting, and muscle pain especially in the calf and lumbar areas. Others may present with aseptic meningitis and in more severe cases, there is renal and hepatic failure and sometimes pulmonary hemorrhage or hemodynamic collapse along with thrombocytopenia.

In New York City, most human cases are associated with exposure to rats, or rodent infested environments. Infected animals may excrete the bacteria into the environment. 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. Person-to-person transmission is rare.

Between 2006 and 2016, there were 26 cases of leptospirosis reported among New York City residents (range of one to three cases per year). The median age was 42 years (range 7 to 80 years). All but one of the cases was male (95%). Cases were reported from all five boroughs: Brooklyn (6), Bronx (8), Manhattan (7), Queens (4) and Staten Island (1).

Given the non-specific presentation of leptospirosis, providers are reminded to consider leptospirosis in any patient presenting with evidence of acute renal and hepatic failure, or any patient with clinically compatible illness (as defined above) and a history of exposure to rats or environments contaminated by rat excreta. Diagnostic testing is available through most commercial laboratories. Providers should order (1) serologic testing (acute and convalescent specimens collected 2 weeks apart, as well as (2) polymerase chain reaction

(PCR) testing on blood and urine samples collected during the first week following the onset of illness and prior to the start of antibiotics.

If you suspect that a person has leptospirosis, begin appropriate antimicrobial treatment as soon as possible (without awaiting diagnostic test results), as early treatment may help decrease the severity and duration of disease. For patients with mild symptoms, doxycycline is a drug of choice (100 mg orally, twice daily). Doxycycline is not recommended for pregnant women or children aged <8 years, and alternative options include ampicillin and amoxicillin. Intravenous penicillin (1.5 MU every 6 hours) is a drug of choice for patients with severe leptospirosis, with ceftriaxone shown to be as effective in one study.

Suspect cases of leptospirosis, especially in the Concourse area of the Bronx, should be reported to the Health Department by calling the Provider Access Line at (1-866-692-3641). As always, we appreciate your continued collaboration with our efforts to respond to emerging infectious disease threats in New York City.

Sincerely,

A handwritten signature in black ink, appearing to read "Demetre Daskalakis". The signature is fluid and cursive, with a long horizontal stroke at the end.

Demetre Daskalakis, MD MPH
Acting Deputy Commissioner
Division of Disease Control