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

2016 DOHMH Advisory #16: Update on Zika Virus Infection in New York City

Please share with your colleagues in Obstetrics/Gynecology, Internal Medicine, Family Medicine, Emergency Medicine, Urgent Care, Pediatrics, Infectious Disease, and Neurology:

- **As of June 24, 2016, 233 Zika virus infections have been diagnosed among New York City residents, including 24 pregnant women.**
- **RT-PCR testing to detect Zika virus RNA in serum and urine is now available at several commercial laboratories.**
- **If testing a pregnant woman for Zika infection, serology must be performed and remains available only at NYC's Public Health Laboratory and New York State Wadsworth Center.**
- **Call the NYC Health Department at 866-692-3641 to:**
  - **Request Zika testing for NYC residents or assistance in interpreting test results.**
  - **Report Zika-positive cases diagnosed by a commercial laboratory.**

June 29, 2016

Dear Colleagues,

During Jan. 19, 2016-June 24, 2016, 3,906 New York City (NYC) residents were tested for Zika virus, and 233 were confirmed with Zika virus infection. All cases were associated with travel to an area with ongoing Zika virus transmission. The most frequently visited areas were Dominican Republic (140 travelers), Puerto Rico (20), and Guyana (14).

Of the 233 Zika cases, 95 (41%) were residents of the Bronx, 52 (22%) were from Manhattan, 47 (20%) from Queens, and 39 (17%) from Brooklyn. One hundred and sixty-two (70%) were female, and 24 (15%) were pregnant at the time of diagnosis. Ages ranged from 1-74 years (median 40 years). The most common symptoms reported were: rash (193; 92%), arthralgia (145; 69%), fever (136; 65%), conjunctivitis (109; 52%). Four or more symptoms were reported by 95 (45%). Of 227 cases diagnosed by RT-PCR testing, 148 (65%) had Zika virus RNA detected in urine only, 45 (20%) had Zika virus RNA detected in serum only, and 34 (15%) had Zika virus RNA detected in both serum and urine.

Two New York City residents with Guillain-Barré syndrome were diagnosed with Zika virus infection. Both patients have been discharged from the hospital.

Testing for Zika Virus
As of June 21, the Health Department knows of three commercial laboratories offering Zika virus RT-PCR testing to NYC residents: Quest Diagnostics, through its subsidiary Focus Diagnostics, Inc., performs RT-PCR testing on serum specimens; Viracor-IBT Laboratories and LabCorp perform RT-PCR on both serum and urine.

Although commercial laboratories offer RT-PCR testing, providers should be aware of two issues. First, both urine and blood should be tested for RT-PCR. Zika RNA is detectable in urine for a longer period after infection than it is in serum. Second, serologic testing is not available commercially. Serology is only available through the NYC Public Health Laboratory and NYS Wadsworth Center laboratory. Negative results on urine or serum Zika virus RT-PCR tests do not rule out infection. If RT-PCR tests are negative, serologic testing is needed to help determine infection status. Serologic testing should be performed on any pregnant women who traveled during pregnancy to a Zika-affected area or who had condomless sex with a partner who recently traveled (within 8 weeks if the man had no Zika symptoms and 6 months if the man had symptoms consistent with Zika virus infection) to a Zika-affected area.

We specifically request providers to:

1) Advise pregnant patients to defer travel to Zika virus-affected areas until the end of their pregnancy.
2) Send a serum specimen to PHL for serology testing for pregnant women even if specimens are sent to a commercial laboratory for RT-PCR testing.
3) Send a urine specimen to PHL for RT-PCR testing if urine specimens were not sent to a commercial laboratory for testing.
4) Order tests for dengue and chikungunya from a commercial laboratory in patients with consistent symptoms.
5) Call **866-692-3641** to:
    a. Complete the testing approval and requisition process. Refer to HAN#7 for Zika virus testing guidelines (http://www1.nyc.gov/assets/doh/downloads/pdf/cd/zika-advisory7.pdf).
    b. Request assistance in interpreting test results. Negative or indeterminate results on both RT-PCR and serology tests do not definitively rule out infection, and patient history and presentation must be considered in addition to laboratory results for clinical decision making.

Reporting Zika Positive Cases Diagnosed at a Commercial Laboratory

Providers need to report to the NYC Health Department, within 24 hours of identification, all cases of Zika virus infection that have been diagnosed at a laboratory other than PHL or Wadsworth Center. Cases can be reported by logging into Reporting Central via NYCMED, by mailing or faxing to 347-396-2632 the paper Universal Reporting Form, or calling 866-692-3641.

If a provider does not already have a NYCMED account, the provider must first register at the NYCMED link above. Once logged in, Reporting Central can be found in the 'My Applications' section. See the Reporting Central New User Guide (PDF).

For more information on Zika virus, providers are encouraged to visit our website at http://www1.nyc.gov/site/doh/providers/reporting-and-services.page.

We encourage providers to report all suspected cases of dengue, chikungunya, or Zika virus infection with no travel history as these may indicate local transmission and the need for public health intervention.

As always, we appreciate your continued collaboration with our efforts in New York City.

Sincerely,

Jay K. Varma, MD
Deputy Commissioner
Division of Disease Control, New York City Health Department

Resources

For non-NYC residents, see the NYS Department of Health website on the NYS Department of Health Zika Virus Webpage.

New York City Health Department: http://www1.nyc.gov/site/doh/health/health-topics/zika-virus.page
New York State Health Department: http://www.health.ny.gov/diseases/zika_virus/
CDC: http://www.cdc.gov/zika/

References

1. Bingham AM, Cone M, Mock V, et al. Comparison of Test Results for Zika Virus RNA in Urine, Serum, and Saliva Specimens from Persons with Travel-Associated Zika Virus Disease - Florida, 2016. *MMWR Morb Mortal Wkly Rep.* 2016;65(18):475-8. http://www.cdc.gov/mmwr/volumes/65/wr/mm6518e2.htm
2. Driggers RW, Ho CY, Korhonen EM, et al. Zika Virus Infection with Prolonged Maternal Viremia and Fetal Brain Abnormalities. *N Engl J Med.* 2016;374(22):2142-51. http://www.nejm.org/doi/full/10.1056/NEJMoa1601824