



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

## 2016 DOHMH Health Alert #49: Potential Breakthrough HIV Infection in Patient on Pre-Exposure Prophylaxis

*Please share with your colleagues in Internal Medicine, Infectious Disease, Sexual Health, HIV primary care, LGBTQ Health*

**Note: This is the same case that was reported in the media in mid October, 2016. We are currently aware of only one case of potential breakthrough in NYC at this time.**

- The Health Department is investigating a case of HIV infection in a New York City resident who was reported to have been adherent to HIV pre-exposure prophylaxis (PrEP).
- Providers are required by law to report all HIV diagnoses to the Health Department within 14 days of diagnosis.
- The Health Department requests that providers report *immediately* by phone any HIV diagnosis in a person receiving PrEP or HIV post-exposure prophylaxis (PEP) because of the elevated risk of drug-resistant HIV infection.

October 27, 2016  
(revised November 1, 2016)

Dear Colleagues,

A case of HIV infection with a multidrug resistant strain of the virus has been reported in a NYC patient taking PrEP. The Health Department is currently investigating this case. Preliminary findings include:

- This individual demonstrated adherence to a PrEP regimen.
- Apparently sufficient drug levels in hair and blood samples were detected a few weeks after the time of the HIV diagnosis.
- The individual acquired an HIV strain with multidrug resistance, including resistance to the drugs in PrEP.
- The infection was confirmed by positive HIV-1 RNA testing. The Multispot HIV1/2 antibody differentiation test was repeatedly negative.

The medication approved for PrEP, Truvada, is highly effective at preventing HIV infection, but rare episodes of HIV infection are still possible and expected. Vigilance for breakthrough infections is necessary.

Healthcare providers are legally required to report new HIV diagnoses to the Health Department within 14 days of diagnosis. Beyond this standard reporting requirement, the Health Department asks that providers suspecting breakthrough HIV infection in patients taking PrEP (or post-exposure prophylaxis) at the time of their positive test result report these cases *immediately* by calling (212) 442-3388. The individual receiving PrEP may be at increased risk of drug-resistant HIV infection. Such reports allow a more efficient public health response, including partner notification and testing to interrupt potential chains of drug-resistant HIV transmission. Additionally, we can assist with interpretation and technical assistance with any unusual patterns of test results in a patient with suspected HIV infection,

**NYC providers are reminded to:**

- Adhere to [NY State Guidelines](#) that recommend lab-based 4<sup>th</sup> generation HIV testing and STI testing

every three months for patients on PrEP. This is critical to avoid the development of Truvada-resistant strains in the event of a breakthrough infection and to prevent transmission of resistant virus in that scenario.

- For a person with newly diagnosed HIV, complete a New York State Medical Provider HIV/AIDS and Partner/Contact Report Form (PRF) and submit it to the NYC Health Department. A Health Department representative will pick-up the completed PRF from you or your designee. Call the Health Department's HIV Epidemiology Program at (212) 442-3388 to arrange for pickup.
- Screen patients for risk of HIV exposure and offer them PrEP, PEP, and condoms as indicated. Patients on PrEP and PEP should be supported to maintain a consistent schedule of HIV and STI testing to allow for early detection and intervention in the event of a new infection. Barrier methods, such as condoms, offer additional protection. To access NYC Condoms for distribution, **email** [condoms@health.nyc.gov](mailto:condoms@health.nyc.gov) or [visit our website](#).

Sincerely,

Demetre C. Daskalakis, MD MPH  
Assistant Commissioner, Bureau of HIV/AIDS Prevention and Control

#### **Resources**

- Provider resources related to prescribing PrEP and PEP: <http://www1.nyc.gov/site/doh/providers/health-topics/prep-pep-information-for-medical-providers.page> .
- Provider resources related to reporting cases of HIV: <http://www1.nyc.gov/site/doh/providers/health-topics/aids-hiv-reporting.page>.

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