Altered Testing Methods Can ID HIV Earlier, May Help in Prevention

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A revised HIV testing algorithm can identify acute infections that would otherwise fall under the radar, MedPage Today reports. In the agency's June 20 issue of Morbidity and Mortality Weekly Report, the Centers for Disease Control and Prevention (CDC) reported two recent studies in which an HIV RNA test detected HIV infections that traditional HIV tests would have otherwise miscategorized as HIV negative.

Acute infections are defined as the period after a person is initially infected and before antibodies can be detected, typically spanning a few weeks. Acute infection plays a "disproportionate" role in transmission according to the CDC. Viral load typically skyrockets during this phase of HIV infection—making someone much more infectious—before it lowers significantly once the body has initiated an immune response.

Testing traditionally has two phases: First, tests detect two classes of HIV antibodies as well as the p24 antigen, which can be identified before the appearance of antibodies. If the test is positive, then a Western Blot test is performed to confirm the test result. However, many of these subsequent tests erroneously provide an HIV-negative result, "potentially leading to adverse clinical outcomes for patients and further HIV transmission within the community," in the words of the report. To get around this discrepancy, two studies used HIV RNA screens to more accurately detect HIV infections.

Between July 2011 and February 2013, a Phoenix emergency department identified 37 HIV infections, 12 of which yielded contradictory results between the first two rounds of tests and and which would have gone undetected without the RNA test. These 12 people had a median viral load of 3.6 million, while the 25 others with established infections had a median viral load of 27,000.

Another screening program detected 99 cases of HIV out of 37,876 people. Of these, 55 (55.6 percent) were detected through an RNA screen following either a negative of indeterminate result from the HIV-1/HIV-2 antibody differentiation test.

To read the MedPage Today article, click here.

To read the CDC's MMWR, click here.

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