

<b>DATE:</b>	July 7, 2017
<b>TO:</b>	Health Alert Network
<b>FROM:</b>	Dr. Rachel Levine, Acting Secretary of Health
<b>SUBJECT:</b>	Recommended HIV Testing Algorithm
<b>DISTRIBUTION:</b>	Statewide
<b>LOCATION:</b>	Statewide
<b>STREET ADDRESS:</b>	Statewide
<b>COUNTY:</b>	Statewide
<b>MUNICIPALITY:</b>	Statewide
<b>ZIP CODE:</b>	Statewide

**This transmission is a “Health Advisory”:** provides important information for a specific incident or situation; may not require immediate action.

**HOSPITALS:** PLEASE SHARE WITH ALL MEDICAL, PEDIATRIC, INFECTION CONTROL, NURSING, AND LABORATORY STAFF IN YOUR HOSPITAL.

**EMS COUNCILS:** PLEASE DISTRIBUTE AS APPROPRIATE.

**FQHCs:** PLEASE DISTRIBUTE AS APPROPRIATE.

**LOCAL HEALTH JURISDICTIONS:** PLEASE DISTRIBUTE AS APPROPRIATE.

**PROFESSIONAL ORGANIZATIONS:** PLEASE DISTRIBUTE TO YOUR MEMBERSHIP.

The Pennsylvania Department of Health (Department) released the following statement on July 7, 2017, to inform health care providers of the current recommended Human Immunodeficiency Virus (HIV) testing algorithm for blood serum and plasma specimens as recommended by The Centers for Disease Control and Prevention (CDC) and the Association of Public Health Laboratories (APHL)

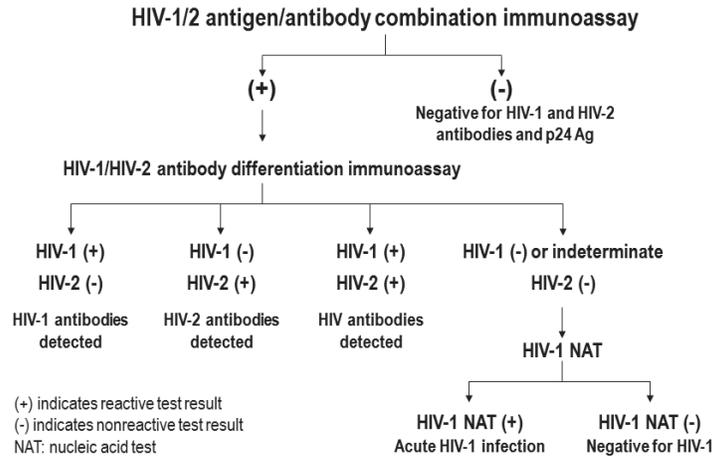
**What is the Recommended HIV Testing Algorithm?**

In 2014, CDC and APHL updated the recommended HIV testing algorithm (algorithm) to a sequence of tests used in combination to improve the accuracy of the laboratory diagnosis of HIV-based testing of serum or plasma specimens. The updated recommendations include tests for HIV antigens and HIV nucleic acid, in addition to antibodies. Studies from populations at high risk for HIV demonstrate that antibody testing alone might miss a considerable percentage of HIV infections detectable by virologic tests, including acute infections.

CDC recommends use of a fourth-generation HIV test as the first step in this new algorithm. The tests not only detect antibodies for HIV-1 and HIV-2, but also detect the p-24 antigen which is present before HIV antibodies develop. The p-24 antigen is detectable in a specimen as early as 15 days after infection, approximately 10 days earlier than previous generation HIV tests detecting antibodies alone. CDC and APHL recommend use of a HIV-1/HIV-2 antibody differentiation immunoassay when the fourth<sup>h</sup>-generation HIV test is reactive. A Food and Drug Administration (FDA) approved qualitative nucleic acid test (NAT) is recommended when the HIV-1/HIV-2 antibody differentiation immunoassay is non-reactive

or indeterminate. If a NAT is indicated, a new specimen may be needed to process the NAT. Please verify with the laboratory.

### Recommended Laboratory HIV Testing Algorithm for Serum or Plasma Specimens



It is important for HIV-testing providers to be aware of the recommended algorithm and the types of HIV tests to be used to ensure accurate laboratory diagnosis of HIV. Advances in testing technology now make it possible to detect acute HIV-1 infection, during which time the risk of transmission is very high. Adopting a policy of routine, opt-out HIV testing in health care settings using the updated HIV testing algorithm is an important strategy to make individuals aware of their infection early and begin treatment. This not only helps prevent transmission, but leads to better health outcomes for those living with HIV.

#### **Special Note:**

The HIV-1 Western blot and HIV-1 immunofluorescence assay (IFA), previously recommended to make a laboratory diagnosis of HIV-1 infection, are no longer part of the recommended algorithm.

Positive results from the recommended algorithm indicate the need for HIV medical-care and an initial evaluation that includes additional laboratory tests (such as HIV-1 viral load, CD4+ T-lymphocyte determination and an antiretroviral resistance assay) to confirm the presence of HIV-1 infection, to stage HIV disease and to assist in the selection of an initial antiretroviral drug regimen.

#### **Additional online resources for HIV testing**

For additional training resources on HIV testing recommendations, providers are encouraged to visit <https://stacks.cdc.gov/view/cdc/23447>.

#### **Additional information**

Health care providers may call the Pennsylvania Department of Health, Bureau of Communicable Diseases weekdays 8 a.m. to 5 p.m. at 717-783-0572.

Categories of Health Alert messages:

**Health Alert:** conveys the highest level of importance; warrants immediate action or attention.

**Health Advisory:** provides important information for a specific incident or situation; may not require immediate action.

**Health Update:** provides updated information regarding an incident or situation; no immediate action necessary.

This information is current as of July 7, 2017, but may be modified in the future. We will continue to post updated information regarding the most common questions about this subject.