CLINICAL GUIDELINES PROGRAM
NEW YORK STATE DEPARTMENT OF HEALTH AIDS INSTITUTE | HIV · HCV · SUBSTANCE USE · LGBT HEALTH

Q/A: HIV Testing

Aisha Khan, DO, and Christine Kerr, MD, updated March 2019

Who Should be Tested for HIV?

What does the NYSDOH AIDS Institute guideline recommend for HIV screening in the general population?
Healthcare providers should offer HIV testing to all individuals ≥13 years old as part of routine healthcare.

What does NYS public health law require with regard to HIV testing?
New York State public health law requires that all individuals aged ≥13 years old receiving care in a primary care setting, an emergency room, or a hospital be offered an HIV test at least once. The law also mandates that care providers offer an HIV test to any person, regardless of age, if there is evidence of activity that puts an individual at risk of HIV acquisition.

Who should be offered *ongoing* testing for HIV?
Healthcare providers should offer an HIV test at least annually to all individuals whose behavior increases their risk for exposure to HIV (such behavior includes condomless anal sex, sex with multiple or anonymous partners, needle-sharing, or sex with partners who share needles). Since many people choose not to disclose risk behaviors, care providers should consider adopting a low threshold for recommending HIV testing.

Also, any individual who has been diagnosed with a sexually transmitted infection (STI) should be offered HIV testing.

How often should HIV screening be performed in individuals who engage in high-risk behavior?
Patients who engage in high-risk behavior should be screened every 3 months. Healthcare providers should provide or refer these individuals for ongoing medical care, risk-reduction counseling and services, and HIV prevention, such as pre-exposure prophylaxis (PrEP). Access to care and prevention are important to maintain the health of individuals at risk and to prevent transmission by those who acquire HIV.

How often should HIV screening be performed in individuals who do not fall into a high-risk behavior category?
According to data from the Centers for Disease Control and Prevention (CDC) [Dailey, et al. 2017], 1 in 2 individuals with HIV have had the virus at least 3 years before diagnosis. Many of these individuals did not acknowledge themselves to be at high risk. The U.S. Preventive Services Task Force notes that for individuals not engaged in the high-risk behavior outlined above but still at increased risk, a somewhat longer interval (for example, 3 to 5 years) may be adopted [U.S. Preventive Services Task Force 2016]. A change in sex partner or marital status merits repeat HIV screening. Routine rescreening may not be necessary for individuals who have not been at increased risk since they were found to be HIV-negative. Women screened during a previous pregnancy should be rescreened in subsequent pregnancies.

Consent

Is written consent required before an HIV test is ordered?
As of May 17, 2017, neither written nor oral consent is needed before ordering an HIV test; however, patients must be informed that an HIV test will be performed, and they may opt-out.

Recommended HIV Test

What is the best test to use for HIV screening?
The optimal test for screening is an HIV antigen/antibody (Ag/Ab) combination immunoassay, which is a laboratory-based test that uses serum or plasma.

Can a rapid point-of-care test be used for HIV screening?
Yes, although it will detect antibodies later in the course of HIV infection and may miss early infection in many cases. There are also newer point-of-care tests that detect antigens and, therefore, earlier infection. It is worth clarifying with your facility which rapid test is used.

Which HIV test should be performed in an individual who has been diagnosed with an STI?
The optimal HIV test is always an HIV Ag/Ab combination immunoassay.

Should an Ag/Ab combination immunoassay be used to screen for HIV in individuals who are taking PrEP?
Yes, that is the optimal test. A rapid point-of-care test can be performed at the same time so patients have an immediate answer, but the rapid test should not replace the Ag/Ab combination immunoassay. If exposure is recent (within the past 10 days) or the patient has signs or symptoms of acute HIV, an HIV RNA test should be ordered.

HIV Testing Follow-Up

What follow-up is recommended if the HIV Ag/Ab combination immunoassay is reactive but the confirmatory HIV-1/HIV-2 Ab differentiation immunoassay is indeterminate or negative?
An HIV-1 viral load test will differentiate acute HIV infection from a false-positive screening result.

What follow-up is recommended if an individual has a reactive point-of-care rapid test (such as OraQuick)?
As follow-up, the healthcare provider should:

- Perform an HIV Ag/Ab combination immunoassay and counsel the patient that the result of the rapid test is preliminary pending the result of the confirmatory HIV test and follow-up Ab differentiation immunoassay.
- Discuss the patient's option of starting antiretroviral therapy (ART) while awaiting confirmatory test results.
- Screen for suicidality and domestic violence, and make sure the patient is safe.
- Make sure a return appointment is scheduled so test results can be delivered in person.

What follow-up is recommended when a patient's HIV Ag/Ab combination immunoassay is reactive?
In this scenario, the healthcare provider should:

- Have the patient's specimens tested for HIV-1 and HIV-2 antibodies using an Ab differentiation immunoassay with reflex. Always include "with reflex" so, if indicated, additional recommended tests are conducted on the same specimen.
- If the results are negative or indeterminate, then perform an HIV-1 RNA test.
- Interpret the final result based on a combination of test results. The NYSDOH Testing Toolkit provides more information about HIV diagnostic tests and the CDC/Association of Public Health Laboratories *Laboratory Testing Algorithm in Serum/Plasma*. The NYSDOH AIDS Institute guideline *HIV Testing* may be consulted as well.
- Discuss ART initiation at the time of a positive result with the first rapid test. Initiation of ART during acute infection may have a number of beneficial clinical outcomes.
- When a diagnosis of acute HIV infection is made, discuss the importance of notifying all recent contacts, and refer patients to partner notification services as mandated by New York State Law. The Department of Health can provide assistance if necessary.

What follow-up is recommended if an individual's HIV test is negative, but they remain at high risk of acquiring HIV?
In this scenario, the healthcare provider should discuss and/or recommend PrEP and ensure that the patient has access to PrEP services. The healthcare provider should also provide risk-reduction counseling (e.g., safer sex practices, needle exchange, post-exposure prophylaxis [PEP]) and advise retesting for HIV every 3 months for as long as the individual is at risk.

Detection of HIV

How soon after infection can HIV be detected with existing HIV tests?
The length of time depends on which HIV test is used. The "window period" is the time between acquiring HIV infection and the time when a specific diagnostic test can detect HIV. For example, as early as approximately 18 days after infection, an Ag/Ab combination immunoassay may be positive for HIV, reliably up to 45 days (window period for laboratory tests) or 90 days (window period for rapid test) afterward. It takes approximately 10 days after infection for HIV viral load to be detectable on an HIV RNA test.

Can a person who has HIV transmit the virus to another person during the window period?
Yes.

Acute HIV Infection

What is acute HIV infection and when should it be considered?
Acute HIV infection is the very early initial stage of HIV infection when the virus is multiplying rapidly and the body has not yet developed antibodies to fight it. Clinicians should consider acute HIV infection if a patient presents with a clinical syndrome consistent with acute HIV.

What are the symptoms of acute HIV infection?
Symptoms of acute HIV infection are similar to those of influenza and may include fever, fatigue, malaise, joint pains, headache, loss of appetite, rash, night sweats, myalgia, nausea, diarrhea, and pharyngitis.

Which laboratory tests should be ordered for an individual who is suspected of having acute HIV?
The healthcare provider should order an HIV-1 RNA test (viral load) and an HIV Ag/Ab combination immunoassay.

- If HIV RNA is not detected, then no further testing is needed.
- Detection of ≥5,000 copies/mL of HIV RNA indicates a preliminary diagnosis of HIV infection.
- Detection of HIV RNA with <5,000 copies/mL requires repeat HIV RNA testing.
- If a diagnosis of HIV infection is made on the basis of HIV RNA testing alone, then the clinician should collect a new specimen 3 weeks after the first and repeat HIV diagnostic testing.

→ KEY POINT

- When acute infection is suspected, an HIV RNA test should always be requested in conjunction with an HIV screening test.

Is a person with acute HIV able to transmit the virus to others?
Yes. A person's HIV viral load rises quickly during the acute phase, which makes the virus highly transmissible.

When treating a pregnant individual who has acute HIV, should the healthcare provider consult with a specialist?
If acute HIV infection is suspected in a pregnant individual, the care provider should first order HIV RNA testing and an Ag/Ab combination immunoassay (recommended) or Ab differentiation immunoassay (alternative) HIV test. If the HIV RNA test is positive or the HIV test is reactive, then, as soon as possible, the care provider should consult with or refer the patient to a clinician who is experienced in diagnosing and evaluating acute HIV infection.

→ KEY POINT

- Early diagnosis and treatment can reduce the risk of mother-to-child transmission of HIV.

PrEP and PEP

Should all patients who are tested for HIV be offered PrEP?
PrEP should be offered to all individuals whose behavior may expose them to HIV. PrEP should be prescribed as part of a

comprehensive prevention strategy that includes risk-reduction counseling about safer sex practices, condom use, and safer injection practices, as well as referral to syringe exchange programs and drug treatment services when appropriate.

→ KEY POINT

- See the NYSDOH AIDS Institute guideline *PrEP to Prevent HIV and Promote Sexual Health* for more information and recommendations.

What is the recommended response to an individual who reports a possible exposure to HIV?

Exposure to HIV is a medical emergency that requires a prompt response.

- A person who reports a potential exposure to HIV should be given a first dose of antiretroviral medications for PEP immediately (ideally within 2 hours of the exposure). The effectiveness of PEP diminishes over time, and PEP is not effective if initiated more than 72 hours after a potential exposure.
- Once the first dose of PEP has been administered, then evaluation of the exposure and recommended testing of the exposed individual and the source (if available) can be performed.
- Refer to the NYSDOH AI guideline on PEP for more information, including recommendations for PEP regimens and follow-up HIV testing. Guidelines are available for PEP following occupational and non-occupational exposure to HIV and following sexual assault.

Should an individual who has been exposed to HIV be tested more than once?

The NYSDOH AI *PEP to Prevent HIV Infection* guideline recommends serial HIV testing, with the first test at baseline (at the time the person presents for PEP) and then at 4 and 12 weeks after exposure.

Where can I learn more about PEP (including the antiretroviral medications used for PEP) and PrEP?

See the NYSDOH AI guideline *PEP to Prevent HIV Infection* and *PrEP to Prevent HIV and Promote Sexual Health*.

How to Find an Expert in HIV Care

How do I locate a healthcare provider with experience in treating patients with HIV, for consultation or referral?

The NYSDOH Clinical Education Initiative (CEI) provides access to HIV specialists through their toll-free CEI Line: 1-866-637-2342.

- *NYSDOH AI Provider Directory*
- *NYSDOH AI Designated AIDS Centers*

How to Learn More

- Related NYSDOH AI Clinical Guidelines:
  - *HIV Testing*
  - *Diagnosis and Management of Acute HIV*
  - *When to Initiate ART*
  - *Selecting an Initial ART Regimen*
  - *Prevention of Mother-to-Child HIV Transmission*
  - *PEP to Prevent HIV Infection*
  - *PrEP to Prevent HIV and Promote Sexual Health*
  - *STI Care*
- *NYSDOH: HIV Testing, Reporting and Confidentiality in New York State 2017-18 Update: Fact Sheet and Frequently Asked Questions*
- *NYSDOH: 2018 Guidelines for use of the HIV Diagnostic Testing Algorithm for Laboratories*

References

Dailey AF, Hoots BE, Hall HI, et al. Vital Signs: Human Immunodeficiency Virus Testing and Diagnosis Delays – United States. *MMWR Morb Mortal Wkly Rep* 2017;66(47):1300-1306. [PMID: 29190267]

U.S. Preventive Services Task Force. Final Recommendation Statement Human Immunodeficiency Virus (HIV) Infection: Screening. 2016 Dec. https://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/human-immunodeficiency-virus-hiv-infection-screening#consider [accessed 2019 Mar 19]