Identifying Cases of Acute HIV Infection

Background

Early detection of HIV is important for improving patient health outcomes and preventing transmission of HIV. The earliest stage of HIV infection, referred to as primary infection or acute HIV infection (AHI) lasts 4 to 8 weeks and is associated with very high levels of viremia and increased likelihood of transmitting the virus to partners. Despite the fact that more than 75% of people develop symptoms of AHI and the fact that many of these individuals seek health care services for these symptoms, very few cases of infection are identified during the acute stage, representing a significant missed opportunity.

Symptoms of Acute HIV Infection

The symptoms of AHI are very similar to the symptoms of the flu with some important differences outlined in the chart to the right. Nasal congestion, sneezing and cough are not typically present with AHI and can be used to help differentiate cases of the flu. The presence of rash or mouth sores may indicate AHI, especially if the patient reports sexual or needle sharing behaviors or acquisition of a sexually transmitted infection during the past 2-6 weeks.

Symptom	AHI	Flu
Fever	X	X
Fatigue	X	X
Muscle ache	X	X
Headache	X	X
Sore Throat	X	X
Swollen Lymph nodes	X	X
Rash	X	
Mouth sores	X	
Nasal congestion and sneezing		X
Cough		X

Updated Clinical Guidelines for Diagnosing and Managing Acute HIV Infection

In July of 2021, the NYS Clinical Guidelines Program updated clinical guidelines on the diagnosis and management of acute HIV infection. These guidelines acknowledge the importance of screening for AHI and early initiation of anti-retroviral treatment (ART), including during the acute phase of infection. The guidelines direct clinicians to include AHI in the differential diagnosis for *anyone* (regardless of reported risk) with a flu- or mono-like illness especially when the patient:

- Presents with a rash
- Requests HIV testing
- Reports recent sexual or parenteral exposure to a person with or at risk for HIV infection
- Presents with a newly diagnosed sexually transmitted infection
- Presents with aseptic meningitis
- Is pregnant or breastfeeding
- Is currently on pre- or post-exposure prophylaxis (PrEP or PEP)

When acute HIV infection is suspected:

- Clinicians should always perform a plasma HIV RNA assay in conjunction with an Ag/Ab combination immunoassay screening test.
- Clinicians should use an Ag/Ab combination immunoassay (preferred) as the initial HIV screening test according to the standard HIV laboratory testing algorithm.
- If the screening test is reactive, clinicians should perform an HIV-1/HIV-2 Ab differentiation immunoassay to confirm HIV infection.
    - Note: When rapid Ab screening is performed, even with a rapid Ag/Ab combination immunoassay, a laboratory-based Ag/Ab combination immunoassay is recommended for follow-up diagnostic HIV testing.
- Clinicians can presume the diagnosis of acute HIV when high levels (>10,000 copies/mL) of HIV RNA are detected in plasma with sensitive NAT, and the result of the HIV screening or type-differentiation test is negative or indeterminate.
- When a low-level quantitative HIV RNA viral load result (<10,000 copies/mL) is obtained in the absence of serologic evidence of HIV infection, the clinician should repeat HIV RNA testing and perform an Ag/Ab combination immunoassay to exclude a false-positive result. (A2)
    - Note: A serologic test result that does not meet the criteria for HIV infection is a nonreactive screening result (Ab or Ag/Ab combination) or a reactive screening result with a nonreactive or indeterminate Ab differentiation confirmatory result.
- Clinicians should seek expert consultation when an ambiguous HIV result is obtained for an individual taking PrEP because the diagnosis of acute HIV can be particularly challenging in patients taking PrEP.

Key Points for Identification of Cases of Acute HIV:

1. Be alert for the symptoms of acute HIV.
2. Ask patients with symptoms suggestive of acute HIV about possible recent sexual or needle sharing behavior and recent sexually transmitted infection.
3. Perform a plasma HIV RNA assay in conjunction with an Ag/Ab combination immunoassay screening test.
4. Be familiar with the updated HIV testing algorithm (See Section 5)

The **Medical Provider HIV/AIDS and Partner/Contact Report Form** (**PRF**) (**DOH-4189**), must be submitted within 24 hours of diagnosis of acute HIV, including primary HIV infection, acute retroviral syndrome, and early HIV infection.

For clinical training on acute HIV infection, visit www.ceitraining.org and type acute HIV infection into the search bar.