An estimated 1.2 million people in the United States are living with human immunodeficiency virus (HIV), and about 20% of them are not aware of their infection. This is important because most people who transmit HIV are either untreated or do not know that they have the virus (or both). Thus, screening and treatment can potentially reduce the spread of HIV.

**Recommendations for Screening**

The Centers for Disease Control and Prevention (CDC) recommends HIV screening for people aged 13 to 64 years. They also recommend:

- Patients be notified that a screening test will be performed unless they opt out
- A general consent for medical care be used to document consent for HIV testing
- People at high risk be screened at least annually
- HIV screening be a routine part of prenatal testing for pregnant women
- Repeat HIV screening in the third trimester if there is an increased rate of HIV among pregnant women in the area

The United States Preventive Services Task Force recommends HIV screening for people aged 15 to 65 years, those who are younger or older if at increased risk, and all pregnant women. Those at very high risk (ie, men who have sex with men and active injection drug users) should be screened annually, whereas others at increased risk should be screened every 3 to 5 years. People in high-prevalence settings (≥1%) should also be considered for repeat screenings. These include people in homeless shelters, correctional institutions, sexually transmitted infection clinics, and tuberculosis clinics.

**People at Increased Risk for HIV**

- Men who have sex with men
- Injection drug users
- People with another type of sexually transmitted infection (including hepatitis C)
- People who have unprotected vaginal or anal sex
- People whose partner has HIV, is bisexual, or an injection drug user

**Facts About HIV**

- Certain risk groups account for disproportionately high percentages of new HIV infections:
  - Men who have sex with men: 68%
  - African Americans: 46%
  - Hispanic Americans: 23%
  - Young people (13-24 years of age): 21%
  - Injection drug users: 7%

- 1.5% of prisoners have HIV; this rate is 3 times higher than in the general U.S. population.

- Hepatitis C occurs in 25% of people with HIV, while hepatitis B occurs in 10%.

- Tuberculosis occurs in 6% to 10% of people with HIV.
• People who exchange sex for money or drugs
• People who live in a high-prevalence setting

Benefits of Screening
Screening for HIV allows HIV-positive individuals to be identified, informed of their status, and provided an HIV treatment plan and a strategy for preventing coinfections. HIV treatment reduces viral load, which in turn reduces morbidity and transmission to sexual partners and the fetuses of infected pregnant women.5

How to Screen for HIV
The CDC has proposed an HIV testing algorithm that has high sensitivity (>99.7%) and specificity (100%).6,7 It is designed to detect early infection, reduce the frequency of indeterminate results on supplemental testing, and differentiate between HIV-1 and HIV-2.6 The algorithm begins with a 4th generation screening test, which detects IgM and IgG antibodies and the HIV p24 antigen. The antibody component detects infection post-seroconversion, while the antigen component detects infection in the pre-seroconversion period. As with other screening assays, any reactive result requires confirmation with a supplemental test. The recommended supplemental test is an HIV-1/HIV-2 differentiation assay, which detects antibodies earlier than Western blots.6 As the word “differentiation” implies, the HIV-1/HIV-2 immunoassays can detect and identify which virus is responsible for the infection, so the patient is given the appropriate antiretroviral therapy.

Implement HIV Screening in Your Practice
HIV screening can be a routine part of caring for your patients. These steps can help:
• Identify those who have not been screened previously and those who are at increased risk.
• Tell these patients that you are going to order an HIV screen unless they opt out.
• Be prepared to discuss and address a patient’s reasons for declining the test when appropriate.
• Be prepared to offer counseling and education to any patient with a positive result. If your male patient has HIV and has sex with men, encourage him to inform his partner and have his partner tested. If the partner tests negative, discuss options to prevent transmission.
• Consider setting up a yearly call-back for patients at high risk.

References
HIV Screening

HIV is a chronic and treatable infection. Though the infection can't be cured, treatment can make a big difference. It can prevent the infection from progressing to AIDS. People who receive treatment can live a near-normal lifespan.

HIV is transmitted sexually or through injection drug use. People with the infection can spread HIV to other people. Most new infections come from people who don't know they are infected. Use of condoms and clean needles helps prevent the spread. Treatment also helps by lowering the amount of virus in the infected person.

What Is HIV Screening?
An HIV screen is a blood test for people who don’t have signs of the infection. Screening is very important, because about 20% of the people living with HIV don't know they have it. So, they are not getting treated. This means their infection could progress to AIDS, the last and most serious stage of the disease. It also means they could spread HIV to their sexual partner. If pregnant, they could spread HIV to their fetus.

Who Should Be Screened?
Experts say everyone aged 13 to 65 years should get an HIV test. They also say all pregnant women should get screened each time they are pregnant. So having an HIV test is an important part of taking care of your health.

Some people should be screened every year. These include:
- Men who have sex with men
- Injection drug users

Other people should be screened every 3 to 5 years. These include people who:
- Have another infection that is spread sexually (such as hepatitis C)
- Don't use condoms during sex
- Have a partner who has HIV, is bisexual, or is an injection drug user
- Exchange sex for money or drugs
- Live where HIV is more common

Three Stages of HIV Infection
1. Acute stage
   - No symptoms or flu-like symptoms
   - Large amount of virus in the body
   - High risk of spreading the virus to others

2. Latent stage
   - Lasts an average of 10 years
   - No symptoms, yet virus is still in the body
   - Can spread virus to others

3. AIDS
   - Lasts about 3 years, ending in death
   - Many symptoms, including rapid weight loss, fatigue, and unusual infections and cancers
   - Can spread virus to others

Treatment can keep the infection in the latent stage and help people live a near-normal lifespan.
What if the Screen Is Positive?

If the screening test is positive, a follow-up test is needed to be sure HIV is present. If the follow-up test is also positive, it means the person has HIV. People with a positive result should see their doctor right away. Their doctor can help them learn more about HIV and how to stay as healthy as possible. People with infection should:

- Have a baseline medical assessment to learn more about their health
- Be tested for other sexually transmitted infections
- Learn about the benefits and risks of HIV treatment
- Decide if they are ready to start lifelong HIV treatment
- Learn about healthy lifestyle choices
- Learn how and when to tell other people about their HIV status
- Learn how to protect their partner from HIV during sex
- Learn about counseling services and support groups

Getting treatment as soon as possible is the most important thing. Treatment keeps the virus under control. It helps protect the infected person’s health and the health of their partner.

How Can the Laboratory Help?

Quest Diagnostics offers the 4th generation HIV test to screen for HIV infection in all 3 stages (see sidebar, page 1). Not all tests can detect HIV in the acute stage, but this one often can. If the screen is positive, the follow-up tests are done right away. So when results are reported, it’s clear whether the person has HIV or not. Results are available in 1 or 2 days.

References