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HIV

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HIV Risk

MSM are profoundly affected by HIV in the United States. In 2010, MSM accounted for 63% of estimated new HIV infections in the United States. Young MSM and MSM of color (particularly black/African-American MSM) bear a disproportionate burden of HIV infection. In 2011, the National HIV Behavioral Surveillance System, a study conducted in 20 cities in the United States, revealed that 18% of MSM tested were HIV-positive. The high prevalence of HIV in MSM places all MSM at increased risk of being exposed.[60]

While the long-term medical management of patients with HIV is outside the scope of this document, all healthcare providers of MSM should be able to:

- Screen and test for HIV infection,
- Identify acute HIV infection,
- Link newly-diagnosed patients to experienced care providers, and
- Counsel patients on HIV prevention methods, including biomedical strategies.

HIV Test Technology

HIV testing technology has improved in the last several years, such that newer tests have shortened the length of the window period substantially. Current HIV tests include:

- **Viral load tests.** These tests can identify HIV RNA in the plasma starting approximately 9-11 days after infection.
- **Fourth-generation combination antigen/antibody (Ag/Ab) immunoassays.** These advanced assays can detect both HIV antibodies and p24 antigen (a major core HIV protein).
    - The p24 antigen can be detected approximately 14 days after infection with HIV and often before HIV antibodies are present.
    - These fourth-generation assays are included in a recently approved laboratory HIV testing algorithm that is designed to identify acute HIV infection and differentiate between HIV-1 and HIV 2. This algorithm is available for use in California laboratories based on a regulation change in June 2013.
- **Third-generation immunoassays.** These assays detect HIV antibodies but not p24 antigen. Most people produce detectable HIV antibodies beginning approximately 3 weeks after infection.
- **HIV-1/HIV-2 antibody differentiation immunoassay.** This serves as the supplemental test in the new diagnostic algorithm.
- **Western blot.** This has been replaced by the HIV-1/HIV-2 antibody differentiation immunoassay in the new algorithm.

See *Screening for HIV* on page 18 for information about asymptomatic screening for HIV.

[60] www.cdc.gov/hiv/risk/gender/msm/facts/index.html

Acute HIV Infection[61]

Acute HIV infection occurs immediately after infection; patients exhibit an initial burst of viremia; however anti-HIV antibodies are undetectable at that time. A significant percentage of new HIV infections are thought to be attributable to individuals with early HIV infection that may be unaware of their HIV status.[62]

Suspect acute HIV infection[61]

Signs or symptoms of acute HIV infection (acute antiretroviral syndrome) with a recent (within 2 to 6 weeks) high risk of exposure to HIV may include one or more of the following:

- Fever
- Lymphadenopathy
- Skin rash
- Myalgia/arthralgia
- Headache
- Diarrhea
- Oral ulcers
- Leukopenia
- Thrombocytopenia
- Transaminase elevation

High-risk exposures include:

- Sexual contact with an HIV-infected person or a person at risk of HIV infection
- Sharing injection drug use paraphernalia
- Contact of mucous membranes or breaks in skin with potentially infectious fluids

Presence of these symptoms or signs should motivate consideration of acute HIV infection even in the absence of reported high-risk behaviors.

Differential diagnosis includes, but is not limited to:

- Viral illnesses such as Epstein-Barr virus (EBV)- and non-EBV (e.g., cytomegalovirus) infectious mononucleosis syndromes, influenza, and viral hepatitis
- Streptococcal infection
- Syphilis

[61] National Institutes of Health. aidsinfo.nih.gov/guidelines/html/1/adult-and-adolescent-arv-guidelines/20/acute-and-recent--early---hiv-infection.
[62] Brenner et al. J Infect Dis, 2007; 195:951-9.

Evaluation/diagnosis of acute HIV infection:

For diagnostic purposes, acute infection is defined as detectable HIV RNA or p24 antigen (the antigen used in currently available HIV Ag/Ab combination assays), in serum or plasma in the setting of a negative or indeterminate HIV antibody test result.

- A reactive HIV antibody test or Ag/Ab test must be followed by supplemental confirmatory testing.
- A negative or indeterminate HIV antibody test in a person with a positive Ag/Ab test or in whom acute HIV infection is suspected requires assessment of plasma HIV RNA to assess for acute HIV infection.
- A positive plasma HIV RNA test, typically with a very high viral load, in the setting of a negative or indeterminate antibody result is consistent with acute HIV infection.

Patients presumptively diagnosed with acute HIV infection should have serologic testing repeated over the next 3 to 6 months to document seroconversion.

Antiretroviral therapy (ART) should be offered for early HIV infection.

Patients should be referred promptly to experienced HIV care providers for additional evaluation and treatment.

Initial laboratory evaluation will include

- HIV antibody testing, CD4 T-cell count, and plasma HIV RNA
- Complete blood count (CBC), chemistry profile, transaminases, Blood Urea Nitrogen (BUN), creatinine, and urinalysis
- Serologies for hepatitis A, B, and C
- Fasting blood glucose and serum lipids
- HIV genotypic resistance testing
- Other tests as clinically indicated

Linking to care

Individuals newly diagnosed with HIV should be linked to healthcare providers who are experienced in the treatment of HIV.

Visit California HIV/AIDS Service Referrals at www.cdcnpin.org/ca/ to locate HIV providers near your patient.

HIV Prevention in the Clinical Setting

Asking patients about their sexual history and practices allows providers to understand each patient's individual factors affecting risk and enables providers to tailor their educational and counseling messages to the patient. The type of sex practiced strongly modifies the risk of HIV transmission. Unprotected receptive anal intercourse confers the highest risk of HIV transmission compared to other types of sex acts; however, there are many other factors which affect risk including HIV viral load of the infected partner, presence of co-infections and the integrity of the mucosa exposed, among others.

Many methods exist to reduce the chances of acquiring HIV infection, including counseling patients about consistent and correct condom use, reducing the number of sexual partners, not sharing needles, and others.

The following biomedical strategies are also available for preventing HIV transmission:

- **Pre-Exposure Prophylaxis (PrEP).** This prevention method involves an HIV-negative individual taking antiretroviral medications every day to lower their risk of acquiring HIV. CDC recommends PrEP as one prevention option for sexually-active adult MSM at substantial risk of HIV acquisition. See Figure 14 for guidance on providing PrEP to patients.

- **Post–Exposure Prophylaxis (PEP).** This involves taking antiretroviral medications for 28 days starting as soon as possible (up to 72 hours) after exposure to HIV. PEP is not a long-term daily method of prevention but rather should be considered after a single event in which an individual may have been exposed to HIV (such as after an episode of unprotected sex).

- **Treatment as Prevention.** This concept refers to treating HIV-positive individuals with antiretroviral medications to suppress their viral load, resulting in subsequent improvement in their health and decreased chance of transmitting HIV to sexual partners.

There are now multiple HIV prevention strategies available for MSM. Talking with patients and identifying which strategies they can employ to protect themselves is a key component of reducing new HIV infections in MSM.

Figure 14. CDC Summary Guidance for HIV PrEP Use for MSM

Detecting substantial risk of acquiring HIV infection	• Adult man • Without acute or established HIV infection • Any sex partners in past 6 months • Not in a monogamous partnership with a recently tested, HIV-negative partner AND at least one of the following • Any anal sex without condoms (receptive or insertive) in past 6 months • Any STD diagnosed or reported in past 6 months • Is in an ongoing sexual relationship with an HIV-positive partner • Is a man who has sex with both women and men (behaviorally bisexual)
Clinically Eligible	• Documented negative HIV test result before prescribing PrEP • No signs/symptoms of acute HIV infection • Normal renal function • No contraindicated medications • Documented HBV infection and vaccination status
Prescription	Daily, continuing, oral doses of TDF/FTC[63] (Truvada), ≤90-day supply
Other Services	Follow-up visits at least every 3 months to provide the following: • HIV test • Medication adherence counseling • Behavioral risk reduction support • Side effect assessment • STD symptom assessment At 3 months and every 6 months thereafter, assess renal function Every 6 months, test for bacterial STD's, including oral/rectal STI testing.

Prepared by the California Department of Public Health

The complete PrEP Guidelines are available online: www.cdc.gov/hiv/pdf/PrEPguidelines2014.pdf

Supplementary materials for providers are also available, including checklists, patient information sheets, supplemental counseling information, and PrEP-related diagnosis and billing codes: www.cdc.gov/hiv/pdf/PrEPProviderSupplement2014.pdf

[63] TDF is tenofovir disoproxil fumarate (trade name Viread®), FTC is emtricitabine (trade name Emtriva)

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