Management of Syphilis in Patients with HIV
Purpose of the Guideline

• Increase the numbers of NYS residents with HIV and syphilis coinfection who are identified and treated with effective interventions.

• Support the NYSDOH Prevention Agenda 2013-2018 to reduce the case rate of primary and secondary syphilis by 10% to no more than 10.1 cases per 100,000 men and 0.4 cases per 100,000 women and reduce disparities for specific populations that are disproportionately affected by syphilis infection.

• Reduce growing burden of morbidity and mortality associated with syphilis infection.
Syphilis Transmission and Prevention

✔ RECOMMENDATIONS

• Clinicians should inform patients with HIV infection about the risk of acquiring syphilis and other STIs from close physical contact with all sites of possible exposure, including the anus, cervix, vagina, urethra, tongue, oropharynx, or any other location where a syphilitic chancre is present. (AIII)

• When patients with HIV infection are diagnosed with early syphilis (primary, secondary, or early latent stage), clinicians should discuss risk-reduction strategies, including the value of condom use (AII); clinicians should also educate patients about the potential for oral transmission of syphilis (AIII), the benefits of identifying infection early (AIII), and the need for prompt evaluation and therapy for sex partners (AIII).

• Clinicians should perform gonorrhea and chlamydia testing for any patient with HIV infection who receives a new diagnosis of syphilis infection. (AII)
Obtaining a Sexual History

**RECOMMENDATION**

- Clinicians should ask all patients about sexual behaviors and new sex partners at each routine monitoring visit to assess for risk behaviors that require repeat or ongoing screening. (AIII)
Who to Screen

• All patients with HIV infection should be serologically screened for syphilis at least once per year.

• MSM who engage, or whose partners may engage, in continued high-risk behavior should be serologically screened for syphilis at least every 3 months.

• The diagnosis of another bacterial STI in a patient with HIV infection or a patient’s sex partner should prompt a clinician to perform a syphilis screening test and to consider more frequent screening for syphilis.

• Pregnant patients with HIV infection should be serologically screened for syphilis at the first prenatal visit.
Frequency of Syphilis Screening

RECOMMENDATIONS

• Clinicians should obtain serologic screening for syphilis at least annually for all patients with HIV infection. (AII)

• In response to the current epidemiology in NYS, clinicians should perform syphilis screening every 3 months (AIII) for HIV-infected MSM at highest risk of syphilis infection, including those who:
  • Report, or whose partners report, multiple or anonymous sex partners. (AIII)
  • Have been, or whose sex partners have been, diagnosed with or treated for a bacterial STI since the last evaluation. (AIII)
  • Engage, or whose sex partners may engage, in sexual activity at sex parties or other high-risk venues. (AIII)
  • Are involved, or whose sex partners may be involved, in transactional sex (e.g., sex workers and their clients). (AIII)
  • Report recreational substance use during sexual activity. (AIII)
  • Self-identify as at high risk of STIs. (AIII)

• Clinicians should obtain serologic screening for syphilis for pregnant patients with HIV infection at the first prenatal visit. (AII)
STI screening should be performed every 3 months for persons at high risk regardless of the frequency of their HIV monitoring visits.

Regular assessment of ongoing risk behavior enables clinicians to determine the appropriate frequency of screening. Clinicians can seek training to enhance their comfort with sexual history-taking and to develop nonjudgmental approaches to educating patients about the importance of STI screening.

The NYSDOH Clinical Education Initiative (CEI) provides HIV, HCV, and STI-related training and educational resources for clinical care providers.

www.ceitraining.org
Syphilis Presentation, Diagnosis, and Reporting

✓ RECOMMENDATIONS

• As part of the initial and then annual comprehensive physical examination for patients with HIV infection, clinicians should examine all skin and mucosal surfaces for lesions, especially less-visible areas, such as the anus, cervix, vagina, vulva, urethra, oropharynx, and under the foreskin in uncircumcised males. (AIII)

• Clinicians should perform a neurologic review of systems, including ophthalmologic and otic, for all patients with HIV infection who are diagnosed with syphilis and follow up with further neurologic evaluation. (All)
Syphilis Presentation

➔ KEY POINTS

• Because the chancre of primary syphilis are usually painless and may go unnoticed by the patient, it is important that the clinician examine all skin and mucosal surfaces of patients with HIV infection during the annual comprehensive physical examination.

• Syphilis should be included as part of the differential diagnosis for patients presenting with oral, genital, cervical, or anal lesions; rash; eye disease or vision complaints; aortitis; or neurological disease.

• Definitive diagnosis of syphilis is made either serologically or, if available, by identification of the causative organism.
Syphilis Diagnosis

✓ RECOMMENDATIONS

• Clinicians should ensure that two-stage syphilis testing is performed by the laboratory if the initial screen is reactive. (AI)

• Clinicians should perform a nontreponemal test, such as the RPR or VDRL test, for repeat screening in patients who have a history of syphilis infection. (AI)
Standard Protocol for Syphilis Screening and Diagnosis

*If clinical suspicion is high, additional testing is necessary.
Alternative, Reverse Algorithm for Syphilis Screening and Diagnosis

- EIA or CIA Testing
  - Result: EIA (+) or CIA (+)
    - Nontreponemal testing (e.g., RPR or VDRL)
      - Result: Nontreponemal (+)
        - Assess for treatment
      - Result: Nontreponemal (-)
        - TP-PA Testing
          - Result: TP-PA (+)
            - Assess for treatment
          - Result: TP-PA (-)
            - STOP*
  - Result: EIA (-) or CIA (-)
    - STOP*

*Result may be false-negative; consider alternative treponemal test if clinical suspicion is high.
Difficulties with Interpreting Syphilis Serologies

→ KEY POINTS

• All syphilis serologic tests may be falsely negative early in infection, including at the initial appearance of the syphilitic chancre.

• Serum samples containing large amounts of nontreponemal reagin rarely, but occasionally, demonstrate a false-negative reaction, known as a prozone reaction.
  • When there is clinical suspicion of syphilis but the nontreponemal test result is negative, clinicians should order laboratory dilution and retesting of the sample.

• Treponemal tests rarely produce false-negative results; however, if clinical suspicion is high, an alternative treponemal test should be considered.
KEY POINT

• Serologic test results are negative in patients with incubating syphilis, and the sensitivity of serologic tests is approximately 80% during the early primary stage 3 of syphilis (i.e., within the first 10 days after the lesion appears).
Diagnosis of Neurosyphilis

RECOMMENDATIONS

 Clinicians should include neurosyphilis in the differential diagnosis of all patients with HIV infection who present with neurologic, ophthalmologic, otic, or neuropsychiatric signs or symptoms. (All)

 Clinicians should perform a lumbar puncture in patients with HIV infection who have syphilis or a history of syphilis when patients present with the following:

 - Neurologic, ophthalmologic, otic, or neuropsychiatric signs or symptoms that are not explained by another etiology. (All)
 - Evidence of treatment failure. (All)
 - Evidence to active tertiary syphilis (aortitis, gummas). (AllIII)
Syphilis Reporting

✓ NEW YORK STATE REQUIREMENT

• Clinicians must report all suspected or confirmed syphilis diagnoses to the local health department of the area where the patient resides according to NYS requirements.
Syphilis Treatment and Follow-Up

RECOMMENDATIONS

• Because of the possibility of false-negative test results in primary syphilis, clinicians should presumptively treat patients at risk of syphilis who present with a lesion typical of a syphilitic chancre. (AIII)

• Clinicians should use long-acting benzathine penicillin G as the recommended treatment for syphilis in patients with HIV infection. (AII)

• Penicillin is the only recommended treatment for all stages of syphilis in pregnant patients. (AII)

• Clinicians should obtain baseline and monthly assessment of serum nontreponemal reagin levels when treating syphilis in pregnant patients with HIV infection if the risk of syphilis reinfection is high. (AIII)
Syphilis Treatment and Follow-Up

➔ KEY POINTS

• To avoid use of the incorrect pharmaceutical preparation of penicillin, clinicians should ensure that long-acting benzathine penicillin G (i.e., Bicillin LA and *not* Bicillin CR) is ordered.

• Treatment failure in a person with HIV infection warrants cerebrospinal fluid examination and treatment based on test results.
Treatment in Penicillin-Allergic Patients

✓ RECOMMENDATIONS

• Clinicians should administer desensitization therapy followed by penicillin therapy to treat penicillin-allergic patients who have neurosyphilis, other forms of tertiary syphilis, syphilis in pregnancy, or syphilis that cannot be treated by an alternative regimen. (AII)

• Clinicians should administer desensitization therapy for patients with HIV infection, followed by penicillin therapy, rather than attempt alternative therapies if adherence to therapy or close follow-up cannot be ensured. (AIII)

• Clinicians should not prescribe azithromycin to treat syphilis in patients with HIV infection. (AII)
Jarisch-Herxheimer Reaction

RECOMMENDATIONS

• In women treated for syphilis infection during the second half of their pregnancy, clinicians should:
  • Obtain a fetal sonogram to evaluate for congenital syphilis. (AII)
  • Advise women who experience fever, contractions, or a decrease in fetal movements to seek immediate obstetric care. (AII)

KEY POINT: Early labor and fetal distress are associated with the Jarisch-Herxheimer reaction. Prompt medical care should be sought by women receiving syphilis treatment during their second half of pregnancy if they experience fever, contractions, or a decrease in fetal movements.
Syphilis Treatment Failure

✔ RECOMMENDATIONS

- Clinicians should perform CSF examination for patients who experience treatment failure, and: 1) Initiate parenteral therapy using a recommended penicillin regimen for neurosyphilis if CSF test results are negative (AII); 2) Treat using a recommended penicillin regimen for late latent syphilis if CSF test results are positive. (AII)

Definition of treatment failure: In the absence of potential exposure for reinfection, treatment failure is defined by any of the following:

- Persistence or development of new clinical signs or symptoms potentially related to syphilis, such as rashes, ulcers, neurologic/ophthalmic signs or symptoms, or gummas.
- Four-fold increase in nontreponemal serology (e.g., RPR 1:4 increases to 1:16).
- Failure of the nontreponemal serology to decrease 4-fold within 12 to 24 months of treatment.
Sex Partner Exposure to Syphilis and HIV

✓ RECOMMENDATIONS

• Clinicians should test and treat patients who report exposure to syphilis according to the recommendations in the guideline. (AII)

• When a patient with HIV infection is diagnosed with syphilis, clinicians should advise the patient to encourage sex partners to seek medical care for possible exposure to both HIV and syphilis and should inform the patient that NYSDOH Partner Services offers free, confidential partner notification assistance. (AIII)
Sex Partner Exposure to Syphilis and HIV

NEW YORK STATE REQUIREMENTS

- NYS Public Health Law mandates that clinicians report all suspected or confirmed syphilis diagnoses to the local health department in the area where the patient resides.

- NYS Public Health Law requires that medical providers talk with HIV-infected individuals about their options for informing their sex partners that they may have been exposed to HIV.
Sex Partner Exposure to Syphilis and HIV

→ KEY POINTS

• When a patient with HIV infection is diagnosed with syphilis, the clinician should inform the patient about the implications of the diagnosis for his/her sex partner(s):
  • A new STI diagnosis signals that the patient was engaging in sexual behaviors that place sex partners at increased risk of acquiring HIV infection.
  • A sex partner may also have been exposed to syphilis and should be tested and evaluated for treatment.
  • The local health department may contact a sex partner confidentially about the potential exposure and treatment options.
• Clinicians should provide patients with information and counseling about notifying partners, risk reduction, and safer sex practices.