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TO: ALASKAN CLINICIANS
TOPIC: RAPID SYPHILIS TESTING & SAME-VISIT TREATMENT FOR HIGH-RISK PATIENTS

INTENDED AUDIENCE:
Clinicians, especially clinicians caring for people who are at high risk for acquiring syphilis and being lost to follow up.

PURPOSE:
The immediate goal of screening for any sexually transmitted infection (STI) is to identify and treat infected patients before they develop complications as well as identify, test, and treat their sexual partners to prevent transmission and reinfections. Rapid syphilis testing is an option to quickly identify probable syphilis cases and can be used to facilitate same-visit presumptive treatment in selected higher risk individuals.

AVAILABLE TESTS:
Clinicians such as physicians, PAs, APRNs, pharmacists, or nurses may consider using the following rapid tests for syphilis:

- Rapid syphilis antibody test (a CLIA-waived EIA such as Syphilis Health Check that detects anti-treponemal antibodies)
- Dual rapid syphilis antibody plus HIV antibody test (a CLIA-waived combination test such as Chembio DPP HIV-Syphilis)

PATIENT SELECTION:
Consider rapid testing in any person not previously diagnosed with syphilis for any one of the following:

- A pregnant woman who has not received syphilis testing presents to care for any reason[1]
- Receives a positive pregnancy test
- Has been incarcerated in the past 12 months
- Has been unstably housed or experienced homelessness in the past 12 months

[1] *Patients do not need a syphilis test at each prenatal visit if they have regular prenatal care visits, tested negative for syphilis at the beginning of prenatal care, and do not have additional risk factors. Everyone should be tested at least three times during pregnancy: at the initiation of prenatal care, again in the third trimester, and at the time of delivery.*

- Is misusing substances
- Has multiple sexual partners
- Had a new sexual partner in the past 12 months
- Is unlikely or unable to attend a follow-up appointment for treatment or be reached with results

PREPARING TO TEST:

1. Ask all patients if they have ever been tested for syphilis before. If yes, ask them when the last test was, where it was performed, and the result.
    a. If the patient has tested positive for syphilis previously, they are not eligible for rapid testing and should be offered standard STI testing including a nontreponemal test (such as an RPR). The rapid treponemal antibody test will likely result positive regardless of treatment status and cannot determine adequate treatment response or identify new infection.
2. Ask all patients if they have had any signs or symptoms of syphilis:
    a. Sores or lesions, especially in the genital and oral area, in the last 12 months
    b. Any rash, especially one that appeared on the palms of hands or soles of feet, a general trunk rash, or a bilateral body rash
    c. Any wart-like lesion in the genital area (condyloma lata)
    d. Any unexplained period of fatigue, lymphadenopathy, fever, or other symptoms
    e. Any unexplained neurologic symptoms such as changes in vision, hearing, or balance
3. Ask all patients if they have a known exposure to syphilis in the past 90 days.
    a. If they have, provide treatment regardless of rapid test result. Sexual contacts of syphilis cases can receive presumptive treatment without any testing. Blood can be drawn at the time of presumptive treatment, but a positive test result is not required. A negative test does not rule out syphilis in a sexual contact that may be in an incubating stage (<90 days).

FOR SYMPTOMATIC PATIENTS

1. Consider providing presumptive treatment regardless of rapid test result.
2. Document signs/symptoms including when they were noticed by the patient and when they changed or resolved.
3. In addition to rapid testing, ensure collection of serum sample for qualitative and quantitative nontreponemal testing (i.e., RPR).
4. Perform a neurologic evaluation and/or refer as indicated for any patient with neurologic symptoms, including ocular or otic (vision or hearing) symptoms.[2]

FOR SEXUAL CONTACTS OF CONFIRMED CASES

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[2]*From CDC treatment guidelines: Persons who have syphilis and symptoms or signs indicating neurologic disease (e.g., cranial nerve dysfunction, meningitis, stroke, or altered mental state) should have an evaluation that includes CSF analysis. Persons with syphilis who have symptoms or signs of ocular syphilis (e.g., uveitis, iritis, neuroretinitis, or optic neuritis) should have a thorough cranial nerve examination and ocular slit-lamp and ophthalmologic examinations. CSF evaluation is not always needed for persons with ocular syphilis if no evidence of cranial nerves 2, 3, 4, 5, and 6 dysfunction or other evidence of neurologic disease exists. If symptoms and signs of otic syphilis are present then an otologic examination is needed; CSF evaluation in persons with otic syphilis does not aid in the clinical management and therefore is not recommended.*

1. If a person was exposed to syphilis within the past 90 days, provide presumptive treatment regardless of rapid test result.
2. In addition to rapid testing, ensure collection of serum sample for qualitative and quantitative nontreponemal testing (i.e., RPR).

FOR REACTIVE (POSITIVE) RAPID TEST RESULTS:

1. Provide presumptive treatment for patients with positive rapid syphilis test results.
   a. Determine pregnancy status. Pregnancy testing is recommended for all women of reproductive age at the time of STI diagnosis.
      i. If patient is pregnant, provide treatment with benzathine penicillin for the patient and all sexual partners. Provide immediate presumptive treatment to any sexual partner who is present at the visit. Schedule a follow-up appointment with a prenatal provider within 1 week and communicate results to the prenatal provider.
   b. Ask the patient whether they have an allergy to penicillin
      i. Syphilis during pregnancy requires treatment with penicillin. If penicillin allergy is present in pregnancy, refer for expedited penicillin allergy evaluation and desensitization as indicated.
      ii. If no penicillin allergy, administer presumptive treatment:

primary, secondary or early latent syphilis[3]	benzathine penicillin 2.4 million units IM **x1**
primary, secondary, or early latent syphilis in pregnancy	benzathine penicillin 2.4 million units IM **x1, can consider a second dose 7-9 days later**
late latent or syphilis of unknown duration	benzathine penicillin 2.4 million units IM **x3 weekly**

- Arrange follow-up as needed for additional doses. Follow facility or practice protocol for penicillin administration, including anaphylaxis response considerations.

      iii. If the patient reports an allergy to penicillin, ask the nature of their allergy and if they have tolerated penicillin or related antibiotics since their last reaction.
      iv. Consider alternative treatment regimen in penicillin-allergic patients or when timely treatment with Bicillin is not available:

primary, secondary, or early latent syphilis	doxycycline 100mg orally 2 times/day for 14 days
late latent or syphilis of unknown duration	doxycycline 100mg orally 2 times/day for 28 days

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[3]*The patient should be considered to have primary, secondary, or early latent syphilis if there is a reason to believe they have had syphilis for <1 year (e.g. they had a negative test within the last 12 months, a known timeline for exposure, or had a characteristic symptom of infection such as a painless sore or a rash on palms and soles within the last 12 months). Otherwise, they can be considered to have syphilis of late/unknown duration. Neurosyphilis symptoms can occur at any stage.*

2. Ensure confirmatory testing is collected
    a. Draw a serum sample and send for qualitative and quantitative RPR (nontreponemal) and lab-based treponemal test to allow for final confirmation, tracking of RPR titers following treatment, and prioritization for contact tracing.
    b. Discuss with the patient that rapid test results are preliminary and confirmatory test results are needed to be more certain of syphilis status. Explain that presumptive treatment is offered because rapid tests are most often positive when someone is currently infected or has had a syphilis infection in the past. While the risks of treatment are low, the risks of untreated syphilis can be severe, including disability and death. Offering treatment while waiting on confirmatory results can save the patient a trip back to a clinic for treatment and decreases the risk of onward transmission to sexual partners.
3. Collect STI screen including gonorrhea and chlamydia, human immunodeficiency virus [HIV], hepatitis C, and hepatitis B.
4. Obtain a sexual history from the patient, including partners, practices, protection, past history, and pregnancy intention.
5. Collect current contact information for the patient and, if possible, names and contact information for their sexual partners within the past 12 months.
6. Report the test result to the Department of Health using the HIV/STD Reporting Form via fax. Fax partner information, if available.
7. Test all partners from past 12 months for syphilis. Consider presumptive treatment for all sexual partners from the prior 90 days per Centers for Disease Control and Prevention (CDC) guidelines.
8. Counsel the patient on preventing sexually transmitted infections. Consider prescribing PrEP or doxyPEP. Consider HPV vaccination if eligible and not fully vaccinated.
9. Remind patients to abstain from sexual activity for a minimum of 7 days after both the patient **and** their partner(s) receive treatment and have a resolution of symptoms to avoid transmission to sexual partners and reinfection.
10. Counsel patients that treatment may cause Jarisch-Herxheimer reaction. Counsel pregnant patients that this reaction may precipitate uterine contractions, preterm labor, and/or non-reassuring fetal heart tracing in the second half of pregnancy.
11. For pregnant patients, refer for prenatal care if applicable. Counsel warning signs in pregnancy and when to seek urgent and/or emergency care.
12. Schedule follow-up visits for additional treatment doses if needed and for clinical and serological evaluation at 6 and 12 months after treatment (or earlier if follow-up is uncertain or repeat infection is a clinical concern).

References:

- Sexually Transmitted Diseases Treatment Guidelines, 2021, Centers for Disease Control and Prevention
- A Guide to Taking a Sexual History, Centers for Disease Control and Prevention
- HIV Pre-exposure Prophylaxis (PrEP) Care System, Centers for Disease Control and Prevention
- Syphilis Health Check package insert and quick reference guide; Chembio combination test information

These recommendations are adapted from a resource included in a presentation by Andrew Yu, BSN, RN, ACRN, the National HIV/HCV/STI Clinical Coordinator at Indian Health Service Headquarters, Division of Clinical & Community Services: Syphilis Response: Best Practices in Indian Country | October 6, 2023. Available at: https://www.indiancountryecho.org/resources/syphilis-response-best-practices-in-indian-country-october-6-2023/