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Maine Health Alert Network (HAN) System

PUBLIC HEALTH ALERT

To: All HAN Recipients
From: Dr. Isaac Benowitz, State Epidemiologist
Subject: **Diagnosis and Treatment of Syphilis in Pregnant People**
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Diagnosis and Treatment of Syphilis in Pregnant People

Summary

- Maine CDC recently received notification of a case of congenital syphilis (CS). This is the second case of CS reported in past three months in Maine.
- The majority of missed prevention opportunities among persons delivering babies with CS in the U.S. were persons with no timely prenatal care or syphilis testing or persons who had timely syphilis testing but were not adequately treated.
- Healthcare providers should test all pregnant persons for syphilis at least once during pregnancy, ideally at the first prenatal visit. If at high risk, patients should be retested twice during the third trimester: at 28 weeks' gestation and at delivery.
- Adequate and timely treatment of syphilis in pregnant persons is 98% effective in preventing CS.
- Persons of childbearing potential diagnosed with syphilis should receive a pregnancy test.
- Persons who are not pregnant and who do not desire pregnancy should be asked about, offered, or referred for contraception.
- Healthcare providers can contact Disease Intervention Specialists (DIS) at Maine CDC by phone at 1-800-821-5821. DIS can help with timely and appropriate treatment and follow-up, and can facilitate partner services, including interview, testing, treatment, and follow-up.
- Syphilis reports should be provided to Maine CDC through electronic laboratory reporting, by fax at 207-287-8186, or by phone at 1-800-821-5821.

Background

Maine CDC recently received notification of a case of congenital syphilis (CS). This is the second case of CS reported to Maine CDC in the past three months. Prior to December 2022, there had not been a case of CS reported in Maine in nearly 30 years.

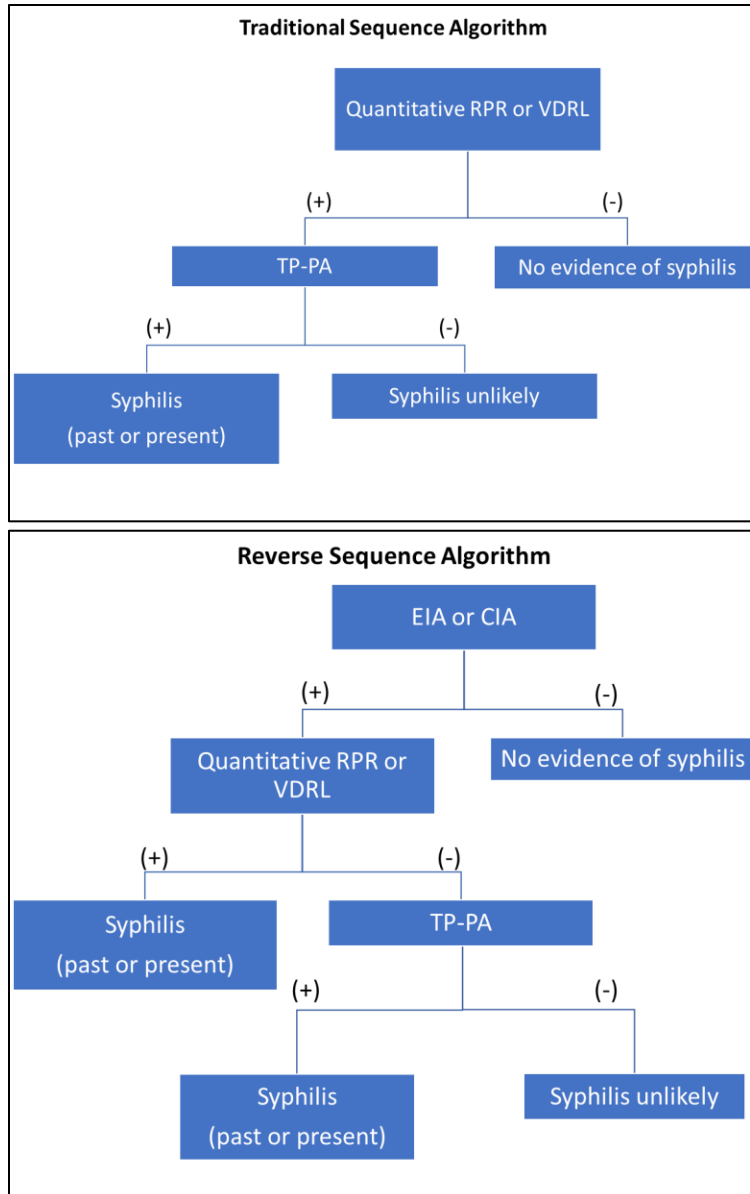
Syphilis rates in the United States have been rising since 2012. From 2012 through 2021, the rate of syphilis cases increased by 224% in the U.S. and by 405% in Maine. In 2022, 23/112 (21%) of syphilis cases in Maine were women between the ages of 15 and 44 years (preliminary data). Preliminary 2021 data for the U.S. include 2,677 cases of CS, an increase of 702% from 2012.

Risk factors for syphilis during pregnancy include sex with multiple partners, sex in conjunction with drug use or transactional sex, delayed or no prenatal care, methamphetamine or heroin use, incarceration of the pregnant person or their partner, and unstable housing or homelessness. From 2013 through 2017, reported use of methamphetamine, injection drugs, and heroin more than doubled among women and men who have sex with women with primary and secondary syphilis. In 2017, 17% of women with primary and secondary syphilis used methamphetamine, 11% used injection drugs, and 6% used heroin during the preceding 12 months.

CS occurs when a pregnant person with syphilis passes the infection to the fetus during pregnancy. This can happen during any stage of syphilis and any trimester of pregnancy; the risk of transmission is highest if the pregnant person has been infected recently. Adequate and timely treatment of syphilis in pregnant persons is 98% effective in preventing CS. From 2017 through 2021, the majority of missed prevention opportunities among persons delivering babies with CS in the U.S. were those with no timely prenatal care or syphilis testing (38%) and persons who had timely syphilis testing but were not adequately treated (34%).

Testing & Diagnosis

- Maine CDC recommends testing for syphilis in all patients who are obtaining any sexually transmitted infection (STI) testing.
    - Two tests are required to diagnose syphilis: a nontreponemal test (i.e., Venereal Disease Research Laboratory [VDRL] or rapid plasma reagin [RPR] test) and a treponemal test (i.e., the *T. pallidum* passive particle agglutination [TP-PA] assay, various EIAs, chemiluminescence immunoassays [CIAs] and immunoblots, or rapid treponemal assays). Use of only one type of serologic test (nontreponemal or treponemal) is insufficient for diagnosis. There are two different algorithms frequently used to diagnose syphilis, both of which are acceptable. Healthcare providers should be aware of their institution's chosen method for testing.



- All pregnant persons should be tested for syphilis at least once during pregnancy, ideally at the first prenatal visit. If at high risk (someone who lives in a community with high syphilis morbidity or who is at risk for syphilis acquisition during pregnancy from drug misuse, STIs during pregnancy, multiple partners, a new partner, or partner with STIs), they should be retested twice in the third trimester: at 28 weeks gestation and at delivery.
- Pregnant people should be tested for syphilis, along with HIV, hepatitis B, hepatitis C, and other STIs, whenever they present for care and especially when they present to emergency departments and urgent care centers, jails or other carceral settings, substance use disorder treatment facilities, and labor and delivery units.
- Test people for syphilis *regardless of known pregnancy status* who are experiencing homelessness, exchange money or drugs for sex, or use methamphetamine, heroin, or cocaine by any route, when they present for care, including and especially in emergency rooms and urgent care centers, jails or other carceral settings, and substance use disorder treatment facilities.

    - Persons of childbearing potential diagnosed with syphilis should receive a pregnancy test.
    - Persons who are not pregnant and who do not desire pregnancy should be asked about, offered, or referred for contraception.
- Persons who deliver a stillborn infant should be tested for syphilis.
- Infants should not be discharged from the hospital until there is documentation that the birthing parent has been tested for syphilis at least once during pregnancy.

Treatment, Additional Care, and Follow-Up of Pregnant Persons with Syphilis and Their Partners

Treatment:
- Pregnant persons with a penicillin allergy should be desensitized and then treated with penicillin, which is the only known effective antimicrobial for preventing transmission to the fetus.
- Partners of pregnant persons should, at a minimum, be presumptively treated for syphilis with benzathine penicillin G 2.4 million units IM. Ideally partners should be evaluated for syphilis by a healthcare provider and treated appropriately.

Additional Care:
- Healthcare providers should:
    - Ask about ongoing risk behaviors of pregnant persons and their partner(s) to assess the risk for reinfection,
    - Offer STI testing, including HIV testing, and
    - Refer patients with syphilis who use or have used substances in the preceding 12 months to behavioral health services

Follow-Up:
- When syphilis is diagnosed during the second half of pregnancy:
    - Management should include a sonographic fetal evaluation for CS. However, this evaluation should not delay therapy.
    - Education should include advising patients to seek obstetric care after treatment if they notice fever, contractions, or decrease in fetal movements, as patients are at risk for premature labor or fetal distress if the treatment precipitates the Jarisch-Herxheimer reaction. Stillbirth is a rare complication of treatment and concern for this complication should not delay necessary treatment.
- If syphilis is diagnosed and treated at or before 24 weeks gestation:
    - Serologic titers should be repeated at delivery, but not before 8 weeks after treatment.
    - Titers should be repeated sooner if reinfection or treatment failure is suspected.
- For syphilis diagnosed and treated after 24 weeks gestation:
    - Serologic titers should be repeated at delivery.
- Neonates born to a person with syphilis should receive follow-up examinations and treatment in accordance with U.S. CDC Treatment Guidelines.

Reporting
- Syphilis reports should be provided to Maine CDC through electronic laboratory reporting, by fax at 207-287-8186, or by phone at 1-800-821-5821 or disease.reporting@maine.gov.

Additional Syphilis Resources
- Congenital syphilis evaluation and treatment guidelines: https://www.cdc.gov/std/treatment-guidelines/congenital-syphilis.htm
- U.S. CDC: Sexually Transmitted Diseases (STDs): Data & Statistics (http://www.cdc.gov/std/stats16/default.htm)

- U.S. CDC: Syphilis: http://www.cdc.gov/std/syphilis
- U.S. CDC STI Treatment Guidelines (2021): https://www.cdc.gov/std/treatment-guidelines/
- Maine CDC STI Treatment Guidelines Summary: https://www.maine.gov/dhhs/mecdc/infectious-disease/hiv-std/documents/pdf/ME%20STI%20Treatment%20Chart%20Mar2022_FINAL_LOGOS_COLOR.pdf
- STI Clinical Consultation Network: https://www.stdccn.org/render/Public
- STI Training Opportunities: https://www.nnptc.org/
- HETL Laboratory Submission Information Sheet for syphilis: https://www.maine.gov/dhhs/mecdc/public-health-systems/health-and-environmental-testing/micro/documents/Detection-of-Syphilis-by-Three-Methods-LSIS.pdf