

Editorials

Closing Primary and Prenatal Care Gaps to Prevent Congenital Syphilis

Kenneth W. Lin, MD, MPH

Georgetown University Medical Center,
Washington, District of Columbia

See related article on page 91.

Unrecognized or inadequately treated syphilis infection during pregnancy leads to congenital syphilis, whose diverse clinical manifestations include stillbirth, skin rashes, cataracts, hepatomegaly, bone abnormalities, and seizures.¹ The review of syphilis in this issue of *American Family Physician* reports that the number of primary and secondary syphilis infections in the United States has steadily increased over the past two decades.² As a result, 1,306 U.S. newborns—including 94 who were stillborn or died shortly after birth—were diagnosed with congenital syphilis in 2018, the highest number reported since 1995.³ From 2009 to 2016, almost 6,000 infants were hospitalized for syphilis complications.⁴ Although some of the alarming rise in cases may be attributed to improved public health reporting,⁵ gaps in primary and prenatal care are facilitating the resurgence of congenital syphilis. Iowa, Minnesota, Mississippi, New Hampshire, North Dakota, and Wisconsin do not require screening for syphilis during pregnancy, and third-trimester screening is optional in most states.⁶ Family physicians can prevent congenital syphilis by following national screening guidelines; taking accurate, detailed sexual histories; providing evidence-based interventions to people who use injection drugs; and advocating to reduce structural barriers to care.

The U.S. Preventive Services Task Force (USPSTF) recommends screening for syphilis infection in all pregnant women when they first present for care, ideally in the first trimester⁷; the Centers for Disease Control and Prevention (CDC) advises rescreening in women at high risk at 28 weeks of gestation and again at delivery.⁸ However, an analysis of U.S. case reports from 2012 to 2016 found that one-half of pregnant women diagnosed with syphilis did not report any behavioral risk factors in the previous 12 months.⁹ In addition to pregnant women, the USPSTF recommends routinely screening adolescents and adults who are at increased risk, including those with HIV infection, men who have sex with men, and residents of high-prevalence communities.¹⁰

A review of factors contributing to congenital syphilis cases in New York City from 2010 to 2016 found that nearly one-half of mothers were infected after an initial nonreactive screening result earlier in pregnancy, and that one in 10 women with adequate prenatal care were not tested for syphilis until less than 45 days before delivery.¹¹ A similar review of cases in Louisiana identified missed prevention opportunities in one-third of cases: lack of any syphilis screening or failure to rescreen in the third trimester; incorrect interpretation of test results; and delays in maternal or newborn treatment.¹² Compounding these issues, infants with unrecognized congenital syphilis can be initially misdiagnosed by clinicians who are unfamiliar with less well-known presenting signs, such as an isolated long bone fracture.¹³

Family physicians should prioritize taking detailed, nonjudgmental sexual health histories,¹⁴ keeping in mind that a woman of reproductive age who believes she is in a monogamous relationship may still be at increased risk of syphilis if her male partner is having sex with men.¹⁵ The American Academy of Family Physicians recently developed a free online practice manual (<https://www.aafp.org/patient-care/public-health/sti.html>) that summarizes current evidence-based screening recommendations for syphilis and other sexually transmitted infections, as well as strategies to implement them efficiently into practice.

The use of methamphetamine, injection drugs, or heroin more than doubled from 2013 to 2017 among men who have sex with women and all women who were diagnosed with primary or secondary syphilis.¹⁶ Illicit drug use increases transmission of syphilis directly through contaminated syringes and indirectly through increased sexual risk behaviors. Family physicians should screen adults for illicit drug use¹⁷ and offer or refer patients for evidence-based treatment of opioid use disorder.^{18,19}

Finally, clinicians can raise awareness of risk factors for syphilis and other sexually transmitted infections in underserved communities and advocate to overcome structural barriers to accessing pre- and postnatal care, such as poverty, racism, and distrust of health care professionals.⁶ Activism and community outreach may be particularly important to prevent congenital

syphilis in black patients, given the enduring legacy of the Tuskegee Study, which for 40 years deceived hundreds of black men with syphilis into thinking they were receiving appropriate treatment.²⁰ For example, Philadelphia's Maternity Care Coalition employed grassroots activism to address high infant mortality rates in its majority-black neighborhoods,²¹ and the CDC's Healthy Communities Program partnered health professionals with community leaders to reduce chronic disease disparities.²²

Address correspondence to Kenneth W. Lin, MD, MPH, at Kenneth.Lin@georgetown.edu. Reprints are not available from the author.

Author disclosure: No relevant financial affiliations.

Editor's Note: Dr. Lin is deputy editor of *American Family Physician*.

References

- Cooper JM, Sánchez PJ. Congenital syphilis. *Semin Perinatol*. 2018;42(3):176-184.
- Ricco J, Westby A. Syphilis: far from ancient history. *Am Fam Physician*. 2020;102(2):91-98. Accessed July 15, 2020. <https://www.aafp.org/afp/2020/0715/p91.html>
- Centers for Disease Control and Prevention. Sexually transmitted disease surveillance 2018. Updated August 27, 2019. Accessed January 14, 2020. <https://www.cdc.gov/std/stats18/default.htm>
- Umaphathi KK, Thavamani A, Chotikanatis K. Incidence trends, risk factors, mortality and healthcare utilization in congenital syphilis-related hospitalizations in the United States: a nationwide population analysis. *Pediatr Infect Dis J*. 2019;38(11):1126-1130.
- Garza R. Increase in state, local reporting efforts behind rise in congenital syphilis rates. Rivard Report. October 11, 2019. Accessed January 14, 2020. <https://therivardreport.com/increase-in-state-local-reporting-efforts-behind-rise-in-congenital-syphilis-rates>
- Stafford IA, Sánchez PJ, Stoll BJ. Ending congenital syphilis. *JAMA*. 2019;322(21):2073-2074.
- Curry SJ, Krist AH, Owens DK, et al. Screening for syphilis infection in pregnant women: US Preventive Services Task Force reaffirmation recommendation statement. *JAMA*. 2018;320(9):911-917.
- Centers for Disease Control and Prevention. 2015 sexually transmitted diseases treatment guidelines. Updated December 27, 2019. Accessed January 14, 2020. <https://www.cdc.gov/std/tg2015/default.htm>
- Trivedi S, Williams C, Torrone E, et al. National trends and reported risk factors among pregnant women with syphilis in the United States, 2012-2016. *Obstet Gynecol*. 2019;133(1):27-32.
- Bibbins-Domingo K, Grossman DC, Curry SJ, et al. Screening for syphilis infection in nonpregnant adults and adolescents: US Preventive Services Task Force recommendation statement. *JAMA*. 2016;315(21):2321-2327.
- Slutsker JS, Hennessy RR, Schillinger JA. Factors contributing to congenital syphilis cases – New York City, 2010-2016. *MMWR Morb Mortal Wkly Rep*. 2018;67(39):1088-1093.
- Rahman MM, Hoover A, Johnson C, et al. Preventing congenital syphilis – opportunities identified by congenital syphilis case review boards. *Sex Transm Dis*. 2019;46(2):139-142.
- Jacobs K, Vu DM, Mony V, et al. Congenital syphilis misdiagnosed as suspected nonaccidental trauma. *Pediatrics*. 2019;144(4):e20191564.
- Savoy M, O'Gurek DT, Brown-James A. Sexual health history: techniques and tips. *Am Fam Physician*. 2020;101(5):286-293. Accessed February 28, 2020. <https://www.aafp.org/afp/2020/0301/p286.html>
- Sugimoto B. AAFP leader voices blog: STI screening is critical as number of cases skyrockets. October 23, 2019. Accessed January 14, 2020. <https://www.aafp.org/news/blogs/leadervoices/entry/20191023lv-stiscreening.html>
- Kidd SE, Grey JA, Torrone EA, et al. Increased methamphetamine, injection drug, and heroin use among women and heterosexual men with primary and secondary syphilis – United States, 2013-2017. *MMWR Morb Mortal Wkly Rep*. 2019;68(6):144-148.
- U.S. Preventive Services Task Force. Final recommendation statement: unhealthy drug use: screening. June 9, 2020. Accessed June 9, 2020. <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/drug-use-illicit-screening>
- Coffa D, Snyder H. Opioid use disorder: medical treatment options. *Am Fam Physician*. 2019;100(7):416-425. Accessed February 2, 2020. <https://www.aafp.org/afp/2019/1001/p416.html>
- Kowalchuk A, Mejia de Grubb M, Zoorob RJ. Preparations for treating opioid use disorder in the office. *Fam Pract Manag*. 2018;25(6):21-26. Accessed February 2, 2020. <https://www.aafp.org/fpm/2018/1100/p21.html>
- Jones JH. *Bad Blood: The Tuskegee Syphilis Experiment*. Free Press; 1993.
- Maldonado L. Lessons in community health activism: the Maternity Care Coalition, 1970-1990. *Fam Community Health*. 2014;37(3):212-222.
- Centers for Disease Control and Prevention. Healthy Communities Program (2008-2012). Updated March 27, 2017. Accessed January 23, 2020. <https://www.cdc.gov/nccdphp/dch/programs/healthycommunitiesprogram> ■