CONGENITAL SYPHILIS

Indiana State Department of Health

CONGENITAL SYPHILIS is a multi-system infection caused by the bacterium *Treponema pallidum*, which is transmitted via transplacental transfer during fetal development or at birth from an infected mother to her child during pregnancy. Congenital syphilis infection results in a wide spectrum of symptom severity in newborns, and only severe cases are clinically apparent at birth.

In the absence of effective treatment during pregnancy:

- 25% result in 2nd trimester miscarriage or stillbirth (especially women diagnosed with primary or secondary syphilis) [1]
- 11% result in neonatal death at term[1]
- 13% result in a preterm or low birth weight infant[1]
- 20% present with clinical signs of congenital syphilis, including jaundice, anemia, snuffles, rash, and pseudo-paralysis. [1]

At delivery, infected babies may not exhibit clear signs or symptoms of congenital syphilis. Without treatment, they may develop symptoms such as dermatologic lesions, swollen lymph nodes, liver, and spleen, and failure to thrive during the first few months of life (early congenital syphilis). Neurological, musculoskeletal, and developmental problems (late congenital syphilis) may not develop until after two years of age. [1]

Syphilis Testing and Indiana Code

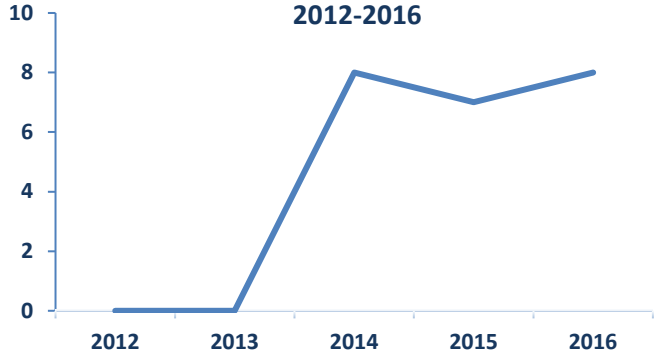
Indiana code (IC 16-41-15-10) requires physicians to test women when they initially become pregnant and again in the third trimester if the woman belongs to a high risk population.[2]

Indiana's Communicable Disease Reporting Rule for Physicians, Hospitals, and Laboratories (410 IAC 1-2.5) requires cases of syphilis (and other communicable diseases) to be reported within **72 hours**. For confirmed or suspected syphilis cases, please call the STI Resource Center Hotline at 1-800-227-8922 for immediate assistance.[3] A Disease Intervention Specialist will contact and treat partners, which is important to reduce the risk of re-infection of the mother once she is treated. [3]

Indiana and Congenital Syphilis

Nationwide, there has been a startling increase in the number of congenital syphilis cases. Between 2014 and 2015, the rate of congenital syphilis rose 6% across the U.S.[8] Seven cases of congenital syphilis were reported in 2015 and 8 in 2016. These increases follow a period of years without any reported cases in the state [Figure 1].

Figure 1. Indiana Congenital Syphilis Cases 2012-2016



Testing for Syphilis

Syphilis is diagnosed with a blood test. Individuals who have been adequately treated for syphilis can still have positive test results, so it is important to ask your patient if he or she has ever been diagnosed with or treated for syphilis. Because interpreting syphilis test results can be complicated, Indiana Disease Intervention Specialists are trained to work with clinicians to diagnose, treat, and case-manage patients with syphilis.

To make a positive syphilis diagnosis, you must have **BOTH** a positive screening test, including titer, and a positive confirmatory test. [4]

For pregnant women, testing is particularly important. Early diagnosis and treatment of syphilis improves health outcomes for both mother and infant.

Please note: Alternate tests for syphilis are available, but please refer to your CDC treatment guidelines for other approved testing.

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Treatment for Syphilis

Preferred treatment for a pregnant woman is dependent on the stage of her infection. To lessen the risk of loss to follow up care, physicians should treat patients as soon as possible.[6]

Early Syphilis Treatment (*infection of less than one year's duration*)
2.4 mu Benzathine penicillin G IM in a single dose

OR

Latent Syphilis Treatment (unknown duration)
2.4 mu Benzathine penicillin G IM once a week for 3 weeks (7.2 million units total)

*For allergies, please review the CDC STD treatment guidelines. Desensitization is recommended. [4]

Treating a pregnant woman infected with syphilis also effectively treats her fetus.[7] To prevent adverse pregnancy outcomes, pregnant women must be screened early; if positive, treatment should begin immediately, but at least 28 days before delivery. Treatment in early pregnancy reduces the potential for fetal complications.[1] Because sex with an untreated partner can cause re-infection, it is especially important to inform pregnant women who have been treated of the risk to their infants should they have sex with an untreated partner.

For infants with confirmed congenital syphilis, or at high risk for having the infection, please refer to the CDC treatment guidelines at www.cdc.gov/std/treatment/2010/toc.htm. [4]

Most Common Mistakes

- Not running a ***quantitative*** RPR test or confirmatory test.
- Testing the umbilical cord blood for syphilis.
- Ordering invasive procedures on infants not indicated by CDC for assessment.
- Patient's risks are not properly evaluated for follow-up testing in the 3rd trimester.

Women who would benefit from additional syphilis testing in the third trimester of pregnancy include:

- Women who received late or limited prenatal care.
- Women with limited access to quality care and screening due to socioeconomic factors.
- Women whose providers did not test them in the first or second trimester.
- Women who experience barriers and cannot negotiate safe sex practices with their partner.
- Women whose partners have multiple, concurrent relationships which may increase their risk for syphilis.
- Women who are involved with substance abuse or exchanging sex for money, housing, or other resources.
- Women who had a previous pregnancy loss or stillborn infant after 20 weeks gestation.[5]

Fast Facts

- Syphilis is **curable**.
- Congenital syphilis is **preventable**.
- All pregnant women should be tested.
- According to the CDC, the rate of congenital syphilis in the U.S. in 2015 was 12.4 cases per 100,000 live births. [8]
- Indiana currently ranks 20th in the U.S. for congenital syphilis at 6.0 cases per 100,000 live births.
- Report cases to local public health authorities at www.in.gov/isdh/17440.htm.

References

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