



2019 Congenital Syphilis Report

As Required by
Texas Health and Safety Code
Section 81.090



TEXAS
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Services

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Executive Summary

In accordance with [Texas Health and Safety Code, Section 81.090](#), the Texas Department of State Health Services (DSHS) has prepared a report summarizing the number of cases of early and late congenital syphilis that were diagnosed in the state in the 2016-2017 calendar year.

Health and Safety Code, Section 81.090, was amended by Senate Bill 1128, 84th Legislature, Regular Session, 2015, to require that no later than January 1 of each odd-numbered year, the Department shall report this information to the Legislature.

The report also contains information on congenital syphilis regarding:

- Definition of early and late congenital syphilis
- Causes and complications
- Treatment
- State trends
- DSHS efforts to reduce congenital syphilis

From January 1, 2016 to December 31, 2017, a total of 237 cases of congenital syphilis were reported in Texas; all cases being classified as early, none as late. Nationally, the congenital syphilis rate has been rising since 2013. While Texas has also seen an increase in the case rate over the past year, with 41.7 cases per 100,000 in 2017, this increase can largely be attributed to enhanced DSHS surveillance. At the same time, sustained rates of primary and secondary syphilis among women that match or exceed the national average have also been found. DSHS will continue its current efforts to reduce congenital syphilis by enhancing sexually transmitted disease (STD) surveillance, increasing pregnancy ascertainment among women with or exposed to syphilis, and providing supplementary resources to communities with the highest rates of congenital syphilis.

1. Introduction

[Texas Health and Safety Code Section 81.090](#) as amended by Senate Bill 1128, 84th Legislature, Regular Session, 2015, requires all pregnant women in Texas to be tested for syphilis at their first prenatal visit and again during the third trimester of their pregnancy. If testing is not performed during the third trimester, or cannot be verified, testing must be performed at delivery. Statute previously required pregnant women to be tested at their first prenatal visit and at delivery.

The legislation also requires that the Department of State Health Services (DSHS) report to the Legislature no later than January 1 of each odd-numbered year the number of early and late congenital syphilis cases diagnosed in Texas in the preceding two calendar years.

2. Background

Causes and Complications of Congenital Syphilis

Pregnant women diagnosed with syphilis can pass the disease to their children during fetal development or at birth. The disease can cause miscarriage, stillbirth, or death shortly after delivery. According to the Centers for Disease Control and Prevention (CDC), up to 40 percent of babies born to women with untreated syphilis may be stillborn or die as a newborn.¹ Some infants with infection can appear healthy at birth, but develop life-altering complications later in life.

Syphilis in Women

In Texas, all positive syphilis labs are required to be reported to DSHS in accordance with [Texas Administrative Code, Title 25, Part 1, Chapter 97, Subchapter F](#). In 2017, the national rate of women diagnosed with primary and secondary syphilis was 2.3 cases per 100,000 females in 2017; in Texas the rates of primary and secondary syphilis among women was 2.2 cases per 100,000 females². The 2017 Texas rate represents a 24 percent increase from the 2016 rate of syphilis diagnoses among women.³ Increased rates of syphilis in women are associated with increased rates of congenital syphilis regardless of pregnancy status.⁴ Women with untreated or inadequately treated primary and secondary syphilis (symptomatic syphilis) during pregnancy are more likely to result in clinical congenital syphilis cases. Women with untreated or inadequately treated non-primary, non-secondary syphilis (early and late latent syphilis that occurs within

¹ Centers for Disease Control and Prevention, "Congenital Syphilis – CDC Fact Sheet," 20 July 2016. [Online]. Available: <http://www.cdc.gov/std/syphilis/stdfact-congenital-syphilis.htm>. [Accessed 11 July 2018].

² Centers for Disease Control and Prevention, "Sexually Transmitted Disease Surveillance 2017: Figure 1 Primary & Secondary- Rates of Reported Cases Among Women by State, United States and Outlying Areas, 2017," [Online]. Available https://www.cdc.gov/std/stats17/2017-STD-Surveillance-Report_CDC-clearance-9.10.18.pdf. [Accessed 02 October 2018].

³ Texas Department of State Health Services, "Texas STD Surveillance Annual Report, 2017," 02 August 2018. [Online]. Available: <https://dshs.texas.gov/hivstd/reports/STDSurveillanceReport.pdf>. [Accessed 01 October 2018].

⁴ Bowen, V., Su, J., Torrone, E., Kidd, S., & Weinstock, H. (2015). Increase in Incidence of Congenital Syphilis — United States, 2012–2014. *MMWR. Morbidity and Mortality Weekly Report*, 64(44), 1241-1245. doi: 10.15585/mmwr.mm6444a3 [Online]. Available: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6444a3.htm> [Accessed 09 July 2018].

one to two years after infection) still have a 23 percent chance of an adverse pregnancy outcome.⁵

Treatment

Pregnant women diagnosed with syphilis should seek treatment as early as possible to prevent serious health problems for their children. Long-acting penicillin therapy must be used to treat syphilis during pregnancy to prevent passing the infection to the baby.⁶ This therapy is extremely effective in preventing mother-to-child transmission, with a success rate of up to 98 percent.⁷ Pregnant women who are allergic to penicillin should see a specialist for desensitization to penicillin.⁸ Women diagnosed with late latent syphilis require three treatments of penicillin given one week apart; failure to complete this therapy appropriately will result in a reported congenital syphilis case.⁹ Additionally, the penicillin treatment regimen appropriate for the mother's stage of syphilis must be initiated at least 30 days prior to delivery to prevent a congenital syphilis case.¹⁰

Early and Late Congenital Syphilis

Congenital syphilis can present with a spectrum of serious manifestations, but may also be asymptomatic. Congenital syphilis is classified as "early" when the child exhibits symptoms at birth up to his or her second birthday, and "late" when symptoms start after age two. Early congenital syphilis can cause vision or hearing loss; non-viral hepatitis causing jaundice of the skin and eyes; long bone abnormalities; developmental delays; inflammation of the liver, spleen, or mucus membranes of the nose; rash; wart-like lesions on the genitals; and additional symptoms. Older children may develop clinical manifestations of late congenital

⁵Arnold, S., Ford-Jones, E. (2000). Congenital syphilis: A guide to diagnosis and management. *Paediatrics & Child Health*, 5(8), 463-469. [Online]. Available: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2819963/> [Accessed 03 October 2018].

⁶Centers for Disease Control and Prevention, "2015 Sexually Transmitted Diseases Treatment Guidelines," June 2015. [Online]. Available: <http://www.cdc.gov/std/tg2015/default.htm>. [Accessed 17 July 2018].

⁷Bowen, V., Su, J., Torrone, E., Kidd, S., & Weinstock, H. (2015). Increase in Incidence of Congenital Syphilis — United States, 2012–2014. *MMWR. Morbidity and Mortality Weekly Report*, 64(44), 1241-1245. doi: 10.15585/mmwr.mm6444a3 [Online]. Available: <https://www.cdc.gov/mmwr/preview/mmwrhtml/mm6444a3.htm> [Accessed 09 July 2018]

⁸Texas Department of State Health Services, "Texas STD Surveillance Annual Report, 2017," 02 August 2018. [Online]. Available: <https://dshs.texas.gov/hivstd/reports/STDsurveillanceReport.pdf>. [Accessed 01 October 2018].

⁹Centers for Disease Control and Prevention, "2015 Sexually Transmitted Diseases Treatment Guidelines," June 2015. [Online]. Available: <http://www.cdc.gov/std/tg2015/default.htm>. [Accessed 17 July 2018].

¹⁰ Ibid.

syphilis, including problems with bone and teeth development, hearing, vision, and the central nervous and cardiovascular systems.¹¹

¹¹ Centers for Disease Control and Prevention, "Congenital Syphilis (*Treponema pallidum*) 2018 Case Definition," [Online]. Available: <https://www.cdc.gov/nndss/conditions/congenital-syphilis/case-definition/2018/>. [Accessed 11 July 2018].

3. Congenital Syphilis in Texas, 2016-2017 Calendar Years

Historically, Texas has reported high numbers of congenital syphilis compared to other states.

In 2016:

- Nationally, Texas ranked sixth (case rate).¹²
 - ▶ There were 71 cases of congenital syphilis reported to DSHS.¹³
 - ◊ The rate was 17.8 cases per 100,000 births.
- Texas accounted for 11.1 percent or one-ninth of the total congenital syphilis cases reported in the United States (Figure 1)

In 2017:

- Nationally, Texas ranked fourth (case rate).
 - ▶ There were 166 cases of congenital syphilis reported to DSHS.
 - ◊ The rate was 41.7 cases per 100,000 births.
- Texas accounted for 18.1 percent or nearly one-fifth of the total congenital syphilis cases reported in the United States (Figure 1).

Texas saw a 134% increase in reported congenital syphilis cases from 2016 to 2017. This is due to both an actual increase in cases and the fact that DSHS efforts to identify additional cases through enhanced surveillance have succeeded.

Nationally, the congenital syphilis rate has been rising since 2013. Figures 1 and 2 below show how Texas compares to rising national patterns. At the same time, sustained rates of primary and secondary syphilis among Texas women also match or exceed the national average, exemplifying that Texas has an ongoing challenge with increased incidence of both syphilis and congenital syphilis.¹⁴

¹² Centers for Disease Control and Prevention, "Sexually Transmitted Disease Surveillance 2017: Table 40. Congenital Syphilis – Reported Cases and Rate of Reported Cases by State, Ranked by Rates, United States, 2017," [Online]. Available https://www.cdc.gov/std/stats17/2017-STD-Surveillance-Report_CDC-clearance-9.10.18.pdf [Accessed 01 October 2018].

¹³ Texas Department of State Health Services, "Texas STD Surveillance Annual Report, 2017," 02 August 2018. [Online]. Available: <https://dshs.texas.gov/hivstd/reports/STDSurveillanceReport.pdf>. [Accessed 01 October 2018].

¹⁴ Ibid.

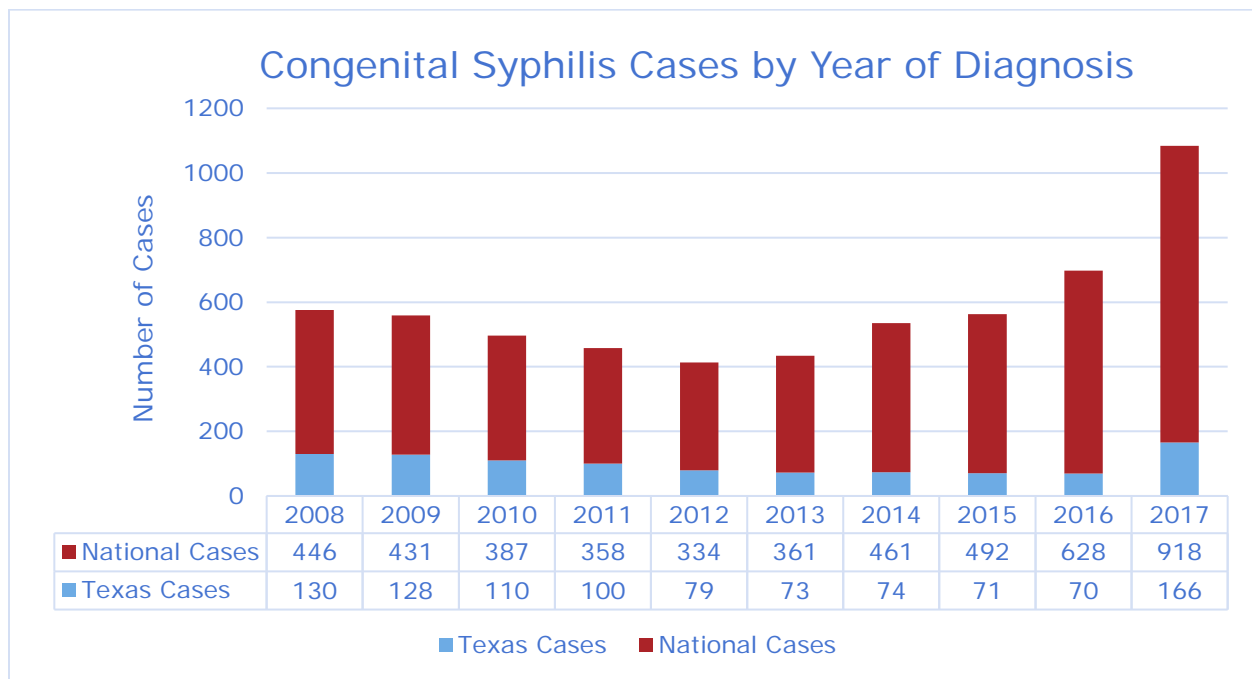
Texas is experiencing true increases in both syphilis and congenital syphilis. At the same time, DSHS efforts are better identifying congenital syphilis cases than in the past. Centers for Disease Control and Prevention (CDC) funding has allowed DSHS to support efforts in metropolitan areas to improve disease reporting and identification, and to increase referrals for women who have a syphilis diagnosis. This emphasis similarly has offered an opportunity for improved identification of congenital syphilis reports in recent years.

CDC funding also allows supporting additional DSHS staff specializing in congenital syphilis to conduct enhanced surveillance by reviewing reports and case materials. This effort has allowed DSHS to identify more congenital syphilis cases, and to also correct a number of probable congenital syphilis cases, that were initially reported as not being congenital syphilis.

Future iterations of congenital syphilis data may change due to 2015 changes to state requirements for congenital syphilis testing. Texas law now requires women be tested for syphilis at their first prenatal visit and again in the third trimester (between 28 and 32 weeks) so treatment can be provided early enough to reduce the chance of transmission to the baby.

At the time of this report, it is too early to determine what effects the new requirements will have on the number or rate of reported cases. Because congenital syphilis can manifest at different ages, it may take up to five years to clinically identify any true increases or decreases in the number of late cases of congenital syphilis. DSHS is closely monitoring the available data to identify any impact caused by the change in testing requirements.

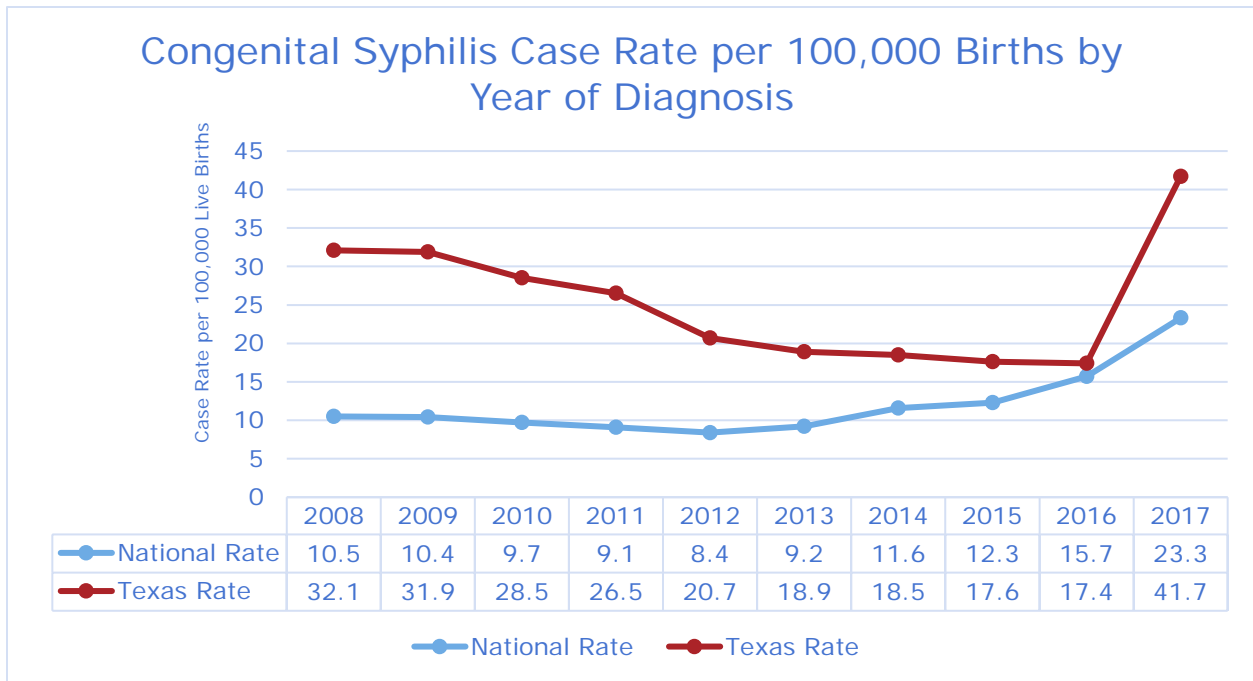
Figure 1 ^{15,16}



¹⁵ Texas Department of State Health Services, "Texas STD Surveillance Annual Report, 2017," 02 August 2018. [Online]. Available: <https://dshs.texas.gov/hivstd/reports/STDSurveillanceReport.pdf>. [Accessed 01 October 2018].

¹⁶ Centers for Disease Control and Prevention, "Sexually Transmitted Disease Surveillance 2017: Table 40. Congenital Syphilis – Reported Cases and Rate of Reported Cases by State, Ranked by Rates, United States, 2017," [Online]. Available https://www.cdc.gov/std/stats17/2017-STD-Surveillance-Report_CDC-clearance-9.10.18.pdf [Accessed 01 October 2018].

Figure 2 ^{17,18}



¹⁷ Texas Department of State Health Services, "Texas STD Surveillance Annual Report, 2017," 02 August 2018. [Online]. Available: <https://dshs.texas.gov/hivstd/reports/STDSurveillanceReport.pdf>. [Accessed 01 October 2018].

¹⁸ Centers for Disease Control and Prevention, "Sexually Transmitted Disease Surveillance 2017: Table 40. Congenital Syphilis – Reported Cases and Rate of Reported Cases by State, Ranked by Rates, United States, 2017," [Online]. Available https://www.cdc.gov/std/stats17/2017-STD-Surveillance-Report_CDC-clearance-9.10.18.pdf [Accessed 01 October 2018].

DSHS Efforts to Reduce Congenital Syphilis

In January 2016, DSHS initiated a pilot project in Public Health Region (PHR) 6/5 South (Houston). DSHS modeled the Fetal Infant Morbidity Review (FIMR) for Congenital Syphilis and Perinatal HIV after a national effort to reduce perinatal HIV¹⁹, but added congenital syphilis to its pilot. FIMR involves performing extensive medical chart reviews and maternal interviews to identify barriers women may face in receiving adequate prenatal care, which impacts the rising rates of congenital syphilis. DSHS received additional CDC funding in 2017 to implement FIMR in Bexar County. This funding was focused solely on congenital syphilis due to high rates in that area and to increase the number of cases reviewed in the PHR 6/5 South FIMR. The additional funding also provided support for two DSHS staff, a Congenital Syphilis Coordinator, and a Congenital Syphilis Epidemiologist.

During the coming calendar years, DSHS will continue working to improve reporting and will perform the following:

- Implement a new STD surveillance system that will prompt investigation activities to ensure more complete reporting;
- Improve pregnancy assessment in women who are diagnosed with syphilis or exposed to syphilis;
- Increase referrals to prenatal care among women who are diagnosed with syphilis during pregnancy;
- Partner with Baylor College of Medicine to evaluate health outcomes in children exposed to syphilis before birth in an ongoing process through a National Institutes of Health study;
- Assess hospital practices around prenatal and delivery syphilis testing through annual hospital surveys performed by DSHS; and
- Provide educational resources for public, provider, and stakeholder audiences, including:

¹⁹ The National Organization for Maternal and Child Health-CityMatCH, "FIMR/HIV Prevention Methodology," [Online]. Available: <http://www.citymatch.org/node/41>. [Accessed 16 July 2018].

- ▶ Training for field staff to improve congenital syphilis reporting, including creation and promotion of a webinar
- ▶ A letter for medical providers about the diagnostic and treatment guidelines for pregnant women and at-risk infants
- ▶ [Congenital Syphilis in Texas factsheet](#)
- ▶ [DSHS Syphilis webpage](#) with additional information on syphilis during pregnancy
- ▶ [Texas STD Surveillance Report](#)

4. Conclusion

Between 2016 and 2017, the rate of congenital syphilis increased significantly. Analysis indicates that this is due to both an actual increase in cases and the fact that Department of State Health Services (DSHS) efforts to identify additional cases through enhanced surveillance have succeeded. In future years, data will better reveal the impact of changes to congenital syphilis testing requirements.

DSHS will continue its current efforts to reduce congenital syphilis by enhancing STD surveillance, increasing pregnancy ascertainment among women with or exposed to syphilis, and providing supplementary resources to communities with the highest rates of congenital syphilis.

List of Acronyms

Acronym	Full Name
CDC	Centers for Disease Control and Prevention
DSHS	Department of State Health Services
FIMR	Fetal Infant Morbidity Review
HIV	Human Immunodeficiency Virus
PHR	Public Health Region
STD	Sexually Transmitted Disease(s)