Congenital Syphilis

February 16, 2024

KEY TAKEAWAYS

- 1.Texas has consistently had some of the highest reported cases of both syphilis and congenital syphilis in the country. 1-3
 - In 2022, approximately 25% of the nation's congenital syphilis cases came from Texas.
- 2. Congenital syphilis can have major health impacts on a baby, but the extent depends on
 - When syphilis was acquired
 - Whether the mother received adequate treatment.^{4, 5}

Background

Congenital syphilis (CS) is a severe, disabling, and often life threatening disease seen in infants whose mothers were infected with syphilis during pregnancy and were not fully treated.

• The rate of syphilis among the general U.S. population began increasing more than a decade ago, with exponential annual increases since 2018, contributing to the rapidly increasing incidence of syphilis among pregnant women. ^{4, 5}





This was **50% higher** than the next highest incidence of 616 in the state of California.¹

Implications

Approximately 40% of babies born to women with untreated syphilis can be stillborn or die from the infection soon after birth.4

- Surviving infants may be affected by lifelong health issues including bone damage, severe anemia, enlarged liver and spleen, blindness, deafness, intellectual or developmental disabilities, or seizures. ^{2, 4}
- People infected with syphilis often do not have symptoms known as latent syphilis — and thus may not be aware of their infection.
- As a result, the lack of timely testing and adequate treatment during pregnancy are the main drivers of CS.

TREATMENT FOR ACTIVE SYPHILIS IN PREGNANT WOMEN CAN REDUCE THE RISK OF STILLBIRTH BY ROUGHLY 80%, HIGHLIGHTING THE PREVENTABILITY OF THIS ISSUE.8





CS and Early Syphilis Cases* in Women of Childbearing Age in Texas, 2013-2022 (Congenital Syphilis in Texas in 2022, DSHS) 1,000 3,500 900 3,000 800 2.500 Congenital Syphilis Cases 600 2.000 500 1,500 400 300 1,000 200 500 100 2017 2018 2020 2022 CS Cases 73 74 71 70 166 372 530 565 689 922 Early Syphilis Cases 653 671 1.139 1.335 1.938 2.829 3.125 534 597 800 *Includes primary, secondary, and early non-primary non-secondary.

Black families are disproportionately affected.



The rate of CS among Black mothers & babies is **3x the rate** among White mothers & babies, and more than **2x the rate** among Hispanic mothers & babies.9

Mitigation Strategies

Mitigating congenital syphilis in Texas will require a multi-pronged approach.

- **Texas Health and Safety Code Section 81.090** requires that syphilis testing occur at the first prenatal visit, in the third trimester, and again at the time of delivery. ^{3, 10}
- Statewide surveillance and referral programs bolster required testing, as a pregnant person's partner(s) must also be tested and treated to **prevent reinfection**.
- Intramuscular benzathine penicillin **G** is the only antibiotic effective in clearing syphilis from the fetus.⁶
 - Due to how rapidly syphilis is spreading, there is currently a nationwide shortage of penicillin.
 - Syphilis infections not in pregnant women should therefore only be treated by oral antibiotics.¹¹
- In 2022, 27% of women delivering an infant with CS received their diagnoses in settings other than the hospital, primary care office, or OB-GYN clinic. ⁹
 - STD clinics, community health centers, and correctional facilities must be equipped with adequate testing and treatment resources.

Next Steps & Other Solutions

Additional actions can be taken to support the efforts to reduce rates of congenital syphilis.

- Train providers on **implementing best practices** for reducing rates of congenital syphilis.
- Ensure patient-provider follow-up for adequate treatment.
- Develop **field-delivered treatment programs** for patients who may be unable or unlikely to receive timely treatment in a clinical setting.
- Develop public education campaigns for **community awareness** of syphilis and congenital syphilis.





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References

- 1.CDC: 2022 STI Surveillance Report State Ranking Tables https://www.cdc.gov/std/statistics/2022/tables/2022-STI-Surveillance-State-Ranking-Tables.pdf
- 2. Fighting the rise of syphilis in Houston, in Texas, and beyond- written by Vicki Powers UT Physicians https://www.utphysicians.com/fighting-the-rise-of-syphilis-in-houston-in-texas-and-beyond/
- 3.2023 Congenital Syphilis Report As Required by Texas Health and Safety Code, Section 81.090. Texas Department of State Health Services. January 2023. https://www.dshs.texas.gov/sites/default/files/legislative/2022-Reports/2023-Congenital-Syphilis-Report.pdf
- 4.CDC: Pregnancy and HIV, Viral Hepatitis, STD & TB Prevention https://www.cdc.gov/nchhstp/pregnancy/effects/syphilis.html
- 5. Stafford, I. A., Workowski, K. A., & Bachmann, L. H. (2024). Syphilis Complicating Pregnancy and Congenital Syphilis. The New England journal of medicine, 390(3), 242–253. https://doi.org/10.1056/NEJMra2202762
- 6.Texas Medical Association and Texas Collaborative for Healthy Mothers and Babies: 10 Myths on Congenital Syphilis https://www.texmed.org/uploadedFiles/Current/2016 Public Health/Maternal Health/311371 MythvsFact Syphilis.pdf
- 7. McDonald R, O'Callaghan K, Torrone E, et al. Vital Signs: Missed Opportunities for Preventing Congenital Syphilis United States, 2022. MMWR Morb Mortal Wkly Rep 2023;72:1269–1274. DOI: https://dx.doi.org/10.15585/mmwr.mm7246e1.
- 8.Tong, H., Heuer, A., & Walker, N. (2023). The impact of antibiotic treatment for syphilis, chlamydia, and gonorrhoea during pregnancy on birth outcomes: A systematic review and meta-analysis. Journal of Global Health, 13. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10273026/
- 9. Congenital Syphilis in Texas in 2022. Texas Department of State Health Services. Accessed February 2024. https://www.dshs.texas.gov/sites/default/files/hivstd/info/cs/files/CSEpiProfile.pdf
- 10. Texas Health and Safety Code 81.090 https://statutes.capitol.texas.gov/Docs/HS/htm/HS.81.htm#81.090
- 11. Bachman LH and Mena L. CDC Division of STD Prevention, July 20, 2023. Clinical Reminders during Bicillin L-A Shortage: https://www.cdc.gov/std/dstdp/dcl/2023-july-20-Mena-BicillinLA.htm

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