MISSISSIPPI STATE DEPARTMENT OF HEALTH

Syphilis Update

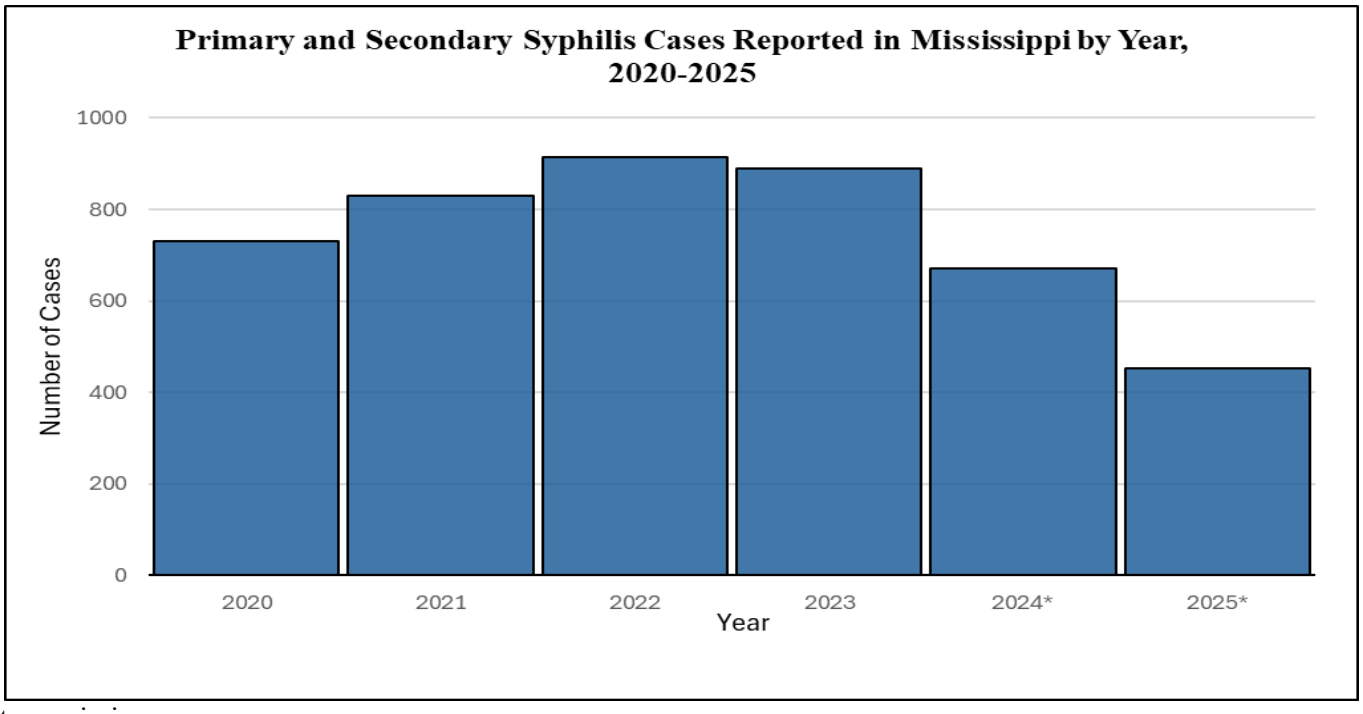
February 25, 2026

Background

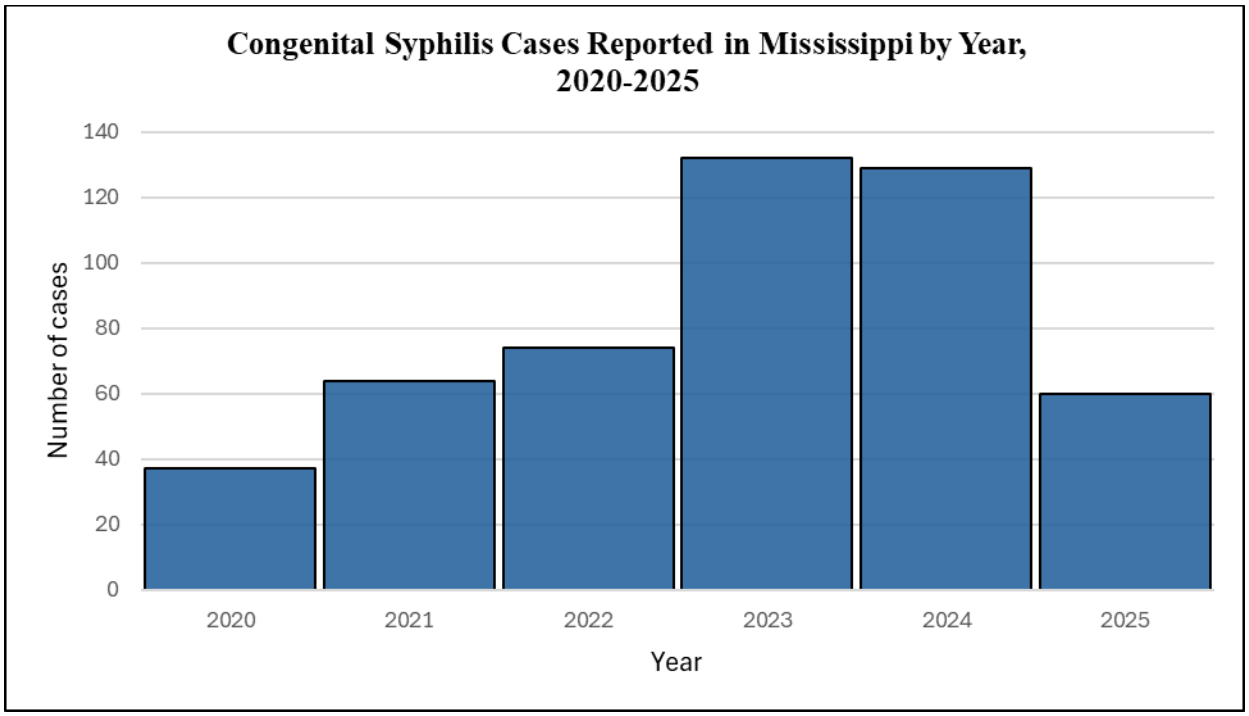
Over the last six years, primary and secondary (P&S) syphilis transmission in the state saw increases through the early part of the reporting period and has more recently seen decreases; however, the overall burden remains high and requires sustained clinical and public health action. Congenital syphilis rose sharply during the same timeframe, demonstrating that missed screening opportunities, delayed treatment, and gaps in follow-up can result in preventable infant infections even when broader trends begin to improve. Of particular concern is the data regarding Public Health District #8, which has experienced the largest numbers of Primary Syphilis, Secondary Syphilis, and Congenital Syphilis.

Data & Statistics

Mississippi has experienced a sustained burden of Primary and Secondary syphilis over the past six years. Reported P&S cases increased from 731 (2020) to 830 (2021) and peaked at 914 (2022), reflecting continued transmission statewide. Cases remained high in 2023 (889) before declining in 2024 (670). 2025 (453, provisional/to-date) indicates ongoing activity and reinforces the need to maintain routine screening among high-risk populations, strengthen rapid linkage to treatment, and improve partner services to interrupt

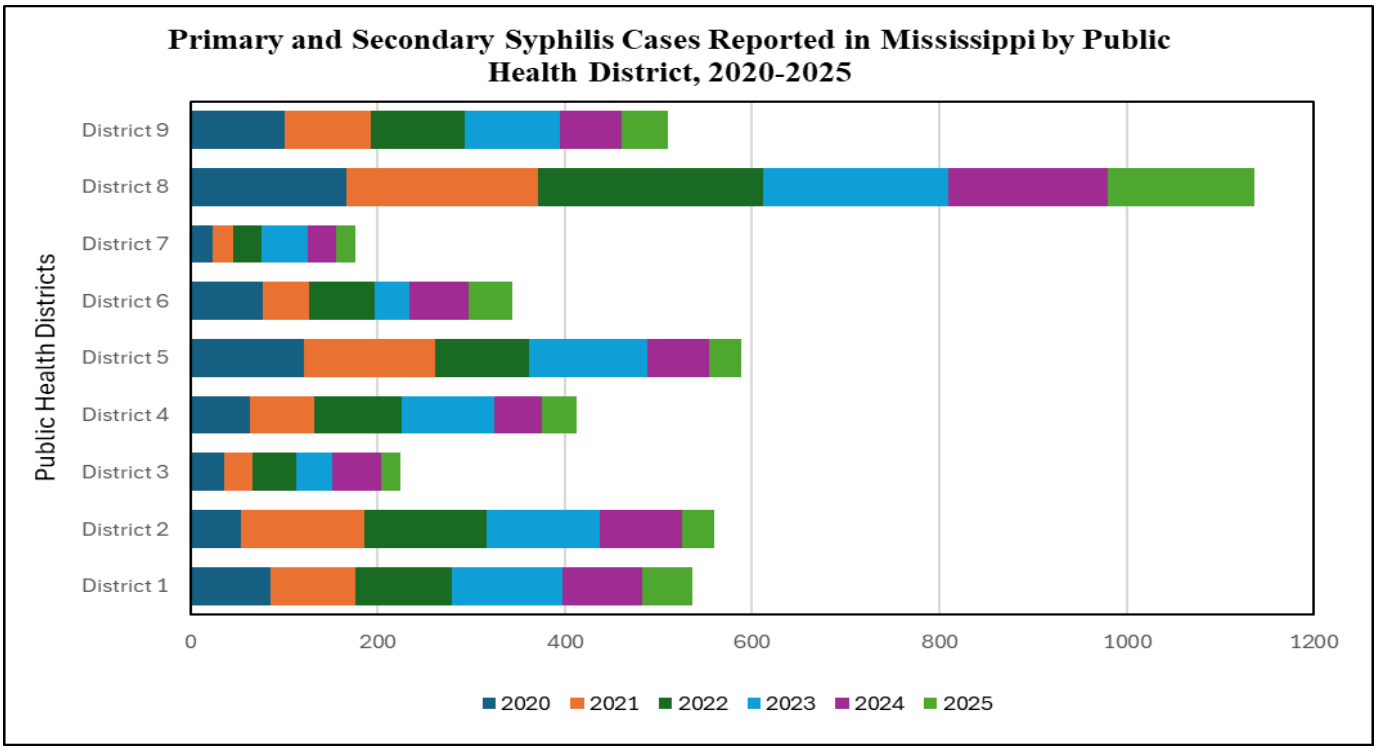


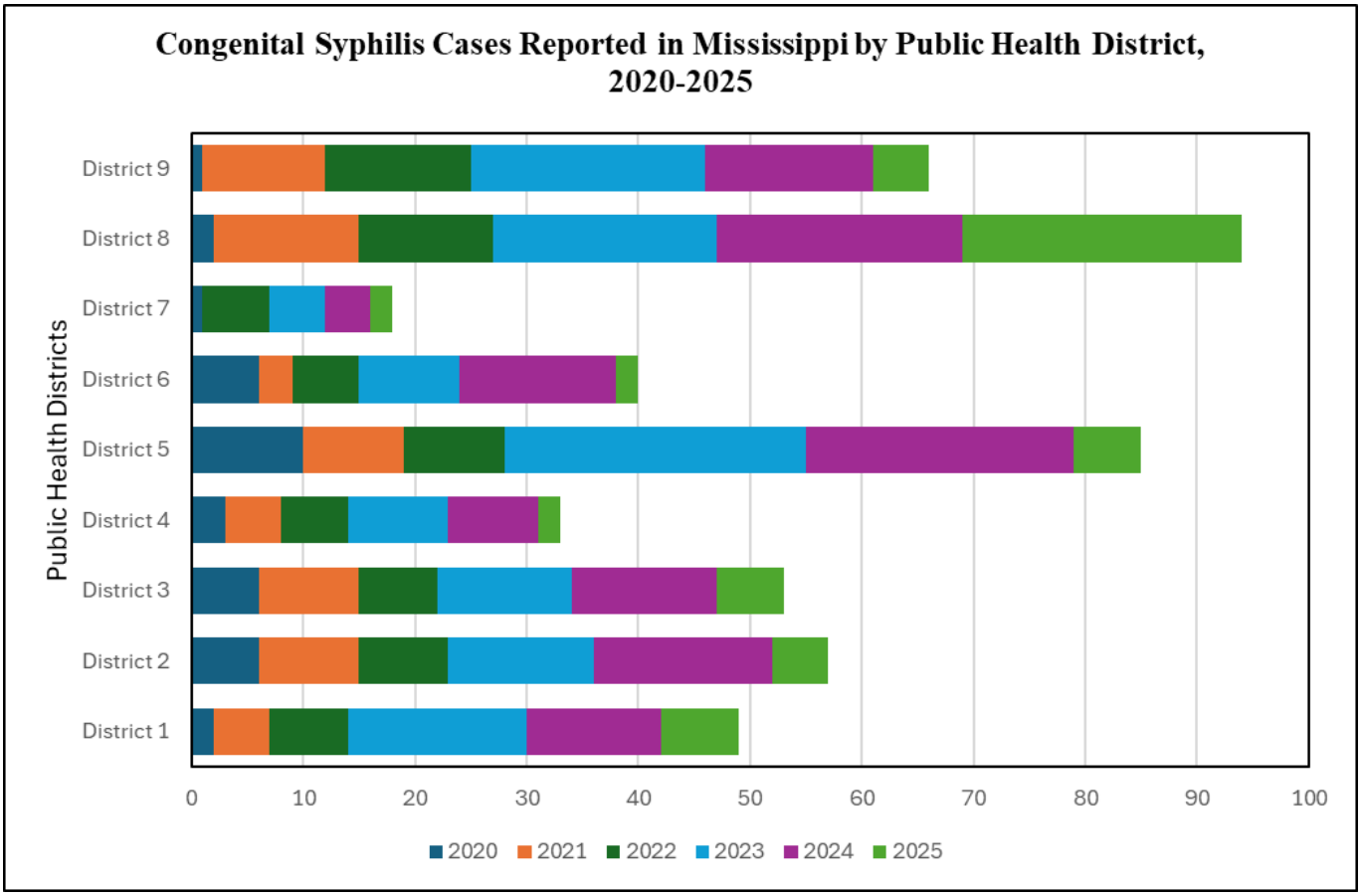
transmission.



Congenital syphilis has increased sharply in Mississippi, reflecting gaps in prevention opportunities during pregnancy. Cases rose from 37 (2020) to 64 (2021) and 74 (2022), followed by a major escalation to 132 (2023). Although 2024 (129) was slightly lower than 2023, it remains critically elevated. Continued risk was observed in 2025 (60, provisional/to-date). Because congenital syphilis is preventable with timely prenatal screening and appropriate treatment, these trends underscore the importance of on-time maternal testing (early pregnancy, third trimester, and at delivery), rapid treatment with penicillin when indicated, and prompt follow-up of reactive results.

Public Health District #8 continues to represent a significant area of concern due to persistently high syphilis burden and increasing congenital outcomes. District 8 reported some of the highest P&S syphilis counts statewide, with cases rising from 167 (2020) to 205 (2021) and peaking at 240 (2022), followed by continued elevated activity through 2023–2025. Of particular concern, congenital syphilis in District 8 increased substantially over the same period, reaching 25 cases in 2025 (provisional/to-date). County-level all-stage syphilis data show sustained transmission concentrated in several counties, with notable contributions from Forrest, Jones, Lamar, and Greene counties. These trends highlight an urgent need to strengthen prenatal screening compliance, rapid referral and treatment, partner services, and targeted community/provider outreach in District 8.


Primary and Secondary Syphilis Cases Reported in Mississippi by Public Health District, 2020-2025
Public Health Districts
District 9
District 8
District 7
District 6
District 5
District 4
District 3
District 2
District 1
0
200
400
600
800
1000
1200
2020
2021
2022
2023
2024
2025


Congenital Syphilis Cases Reported in Mississippi by Public Health District, 2020-2025
Public Health Districts
District 9
District 8
District 7
District 6
District 5
District 4
District 3
District 2
District 1
0
10
20
30
40
50
60
70
80
90
100
2020
2021
2022
2023
2024
2025

All Syphilis Case numbers by Count for District 8						
County	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**
Jefferson Davis	8	15	21	21	13	24
Covington	18	38	38	36	23	24
Jones	88	72	91	61	72	94
Wayne	10	13	13	9	14	20
Marion	<5	27	26	34	36	30
Lamar	28	59	73	78	54	49
Forrest	113	165	191	181	156	146
Perry	7	11	19	12	20	11
Greene	<5	<5	8	7	54	60

MSDH Response Activities

In April of 2023, syphilis testing during pregnancy was made a requirement for pregnant women in their first trimester, third trimester, and at delivery as a part of Mississippi's efforts to prevent congenital syphilis in infants. With this new requirement of syphilis testing during the third trimester and at delivery the MSDH STD/HIV program saw a significant increase in the reporting of maternal syphilis cases reported by providers and hospitals within Mississippi. MSDH has a Syphilis Task Force focusing on efforts to reduce syphilis in certain areas with higher disease burden. The Syphilis Task Force aimed to increase collaboration with community partners and encouraged syphilis testing within communities the MSDH could not reach without their help. However, to have maximum impact on syphilis and congenital syphilis rates in Mississippi, syphilis must be addressed for all affected groups across the state. MSDH encourages providers to conduct routine STI screening with confirmatory testing, and treatment for both genders.

In February 2025, the MSDH STD/HIV program piloted the MS SHOT (Syphilis Home Observed Therapy) in Hinds County, in which a Disease Intervention Specialist (DIS) and a contract nurse made home visits to syphilis patients who did not have transportation to return to Crossroad Clinic for treatment. The eligibility criteria included pregnant women, clients unable to return to scheduled appointments, or those who were listed as "unable to locate" on internal reporting. The DIS and nurses successfully treated fifteen clients through home visits, and fourteen clients were treated at Crossroad Clinic from February-September 2025. In addition, the MS SHOT nurses assisted the DIS with reviewing congenital syphilis labs. The Hinds County SHOT pilot program ended October 2025.

MSDH has successfully implemented dual Point of Care (POC) testing within fifteen county health departments within Mississippi with high morbidity of syphilis and HIV. The fifteen counties include Attala, Coahoma, DeSoto, Forrest, Grenada, Harrison, Hinds, Jackson, Jones, Lee, Leflore, Lowndes, Rankin, Tishomingo, and Yazoo. With the implementation of POC testing Disease Intervention Specialists (DIS) and clinicians provide faster testing, treatment, interviews, initiation of partner services, and linkage to care for patients who test positive for syphilis or HIV. In addition, the DIS, case managers, and community health workers (CHW) work closely to ensure all clients are linked to care in a timely manner.

The MSDH Office of STD/HIV is partnering with community health clinics to provide education and technical assistance that supports local STI screening initiatives for people of all genders, with a targeted focus on increasing syphilis screening and treatment among women. MSDH will also be partnering with

emergency departments in high-morbidity areas to implement point-of-care syphilis/HIV combination testing to screen patients as clinically appropriate.

Directions for Clinicians (Dr. Gant)
Throughout history, syphilis has been called the "Great Imitator" because its signs and symptoms can resemble many other conditions, and the appearance of the rash can vary widely. Many patients do not recognize or report symptoms, and the primary lesion (chancre) is often painless and may be located in areas that are difficult to see (e.g., cervix/vagina, rectum), which can delay diagnosis. As a result, syphilis can be missed without routine risk assessment and appropriate screening—especially during pregnancy, when timely detection and treatment are critical to preventing congenital syphilis.

To help address rising syphilis morbidity in Mississippi, healthcare providers are asked to:

- **Maintain recommended syphilis screening during pregnancy** (including repeat testing when indicated by risk and/or timing) and **report all positive results to MSDH at 601-576-7723.**
- **Incorporate a brief, detailed sexual history** into the medical and social history when clinically appropriate (partners, condom use, STI history, pregnancy status, and other exposure risks).
- **Perform routine syphilis screening for patients with risk factors**—even when asymptomatic—such as multiple or new partners, inconsistent condom use, recent STI diagnosis, known exposure, substance use associated with higher-risk sexual activity, or other local epidemiologic risk indicators.
- **Include syphilis in the differential diagnosis for unexplained rashes**, particularly those involving the **palms and soles**, and for mucocutaneous lesions or systemic symptoms without a clear cause.
- **Test when clinical concern exists** (e.g., compatible symptoms, known contact to syphilis, or uncertain prior treatment history), and **do not delay evaluation** while awaiting symptom progression or resolution.

Syphilis serologic testing is typically performed using a two-step algorithm. If the initial screening test is reactive, a confirmatory test is needed to clarify current versus past infection and guide management. If confirmatory testing is not automatically reflexed by the laboratory, providers should ensure follow-up testing is completed per the algorithm used (commonly a treponemal confirmatory test such as TP-PA, and/or a quantitative nontreponemal titer such as RPR/VDRL). Documentation of the confirmatory result and quantitative titer (when applicable) is essential for staging, treatment selection, and monitoring response to therapy.

Syphilis Clinical Findings	
Organ System	***Clinical Findings***

Skin and Mucous Membranes	• Rash or other skin lesions with varied appearance frequently on palms/soles
	  ○ Macular/papular/maculopapular
	  ○ Annular
	  ○ Psoriasiform
	  ○ Necrotic (rare)
	• Condyloma lata: moist, gray-white, wart-like growths appearing in warm moist areas such as the perineum and the anus
	• Patchy alopecia, often with a moth-eaten appearance
	• Mucous patches: flat, silver-gray discrete macules, plaques or erosions involving the mouth, tongue, or ano-genital mucosa
	• Split- or fissured-papules at the angles of the mouth and nasolabial folds (rare)

Systemic	• Lymphadenopathy

	• Systemic symptoms including malaise, fever, and other nonspecific constitutional symptoms
Gastrointestinal	• Gastric syphilis • Hepatitis (usually subclinical)
Renal	• Glomerulonephritis • Nephrotic syndrome
Musculoskeletal	• Arthritis • Periostitis
Neurologic	• Signs/symptoms of meningitis (e.g., subtle headache) • Cranial nerve (CN) dysfunction (especially 6th, 7th, 8th CN) • Meningovascular syphilis with stuttering stroke symptoms
Ocular/Otic	• Symptoms of anterior, posterior, or panuveitis; other manifestations include episcleritis, vitritis, retinitis, papillitis, interstitial keratitis, acute retinal necrosis, and retinal detachment • Symptoms of otologic syphilis (e.g., hearing loss, tinnitus, vertigo)

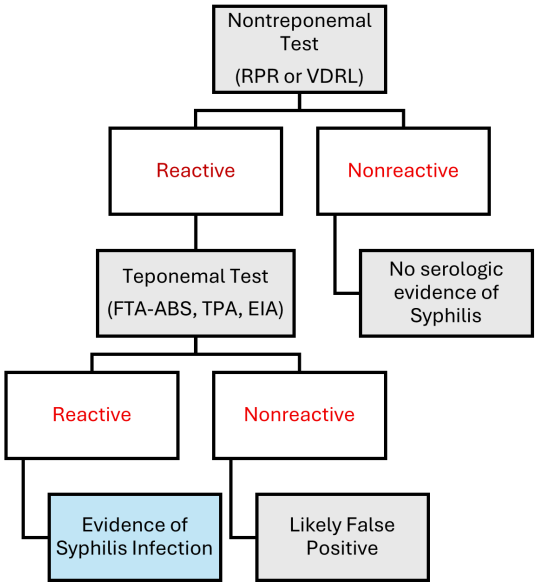


Figure 1 – Traditional Algorithm (above)

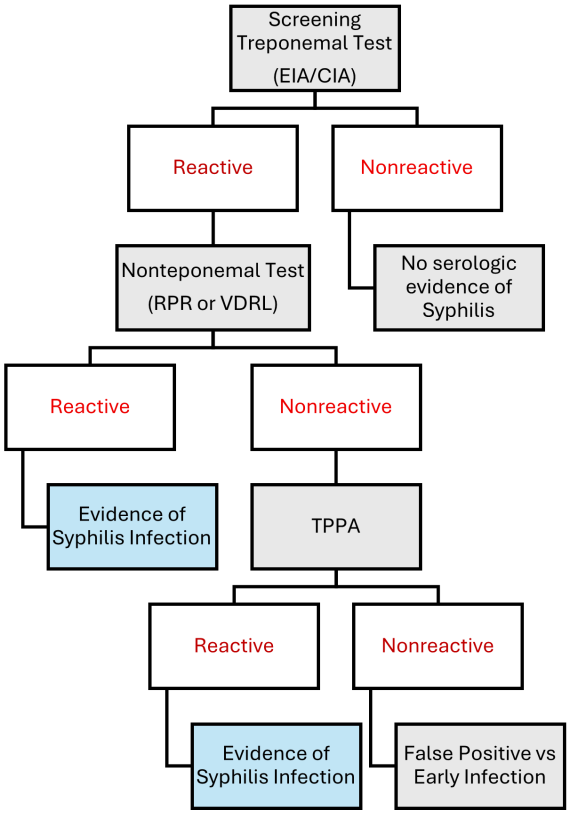


Figure 2 – Reverse Algorithm (above)

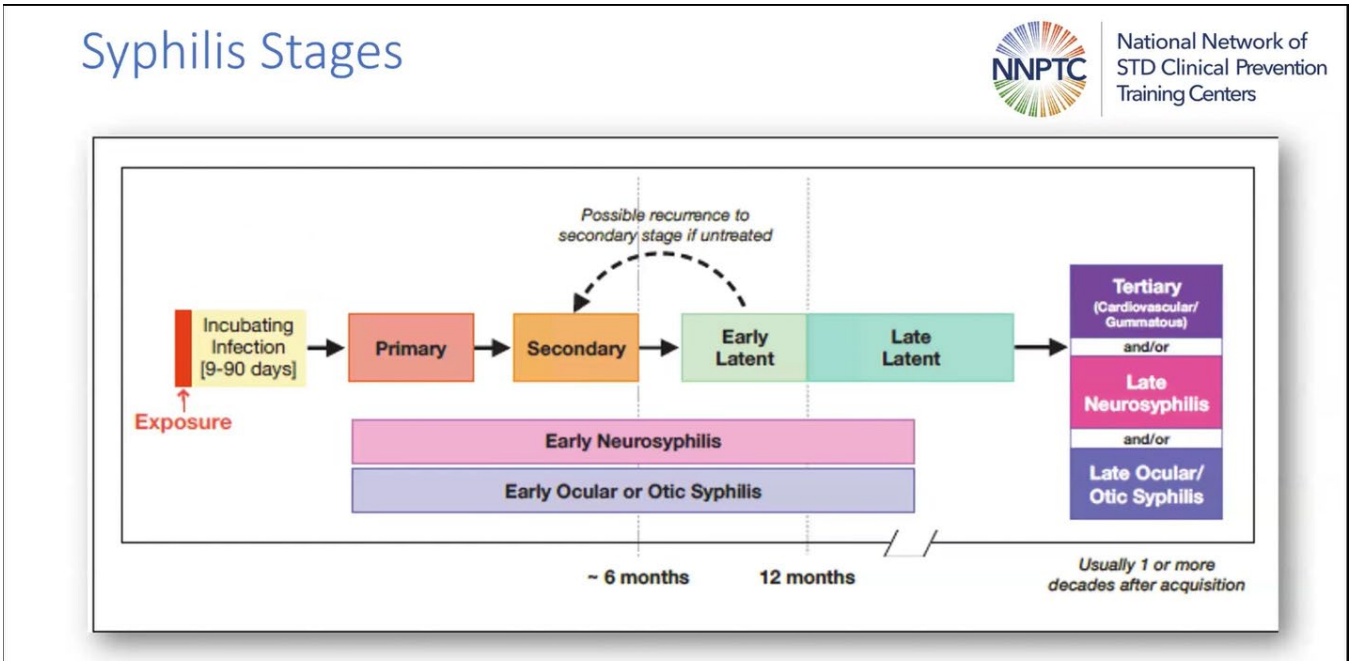


Figure 3 – Syphilis Stages

<u>Treatment Guidelines</u>

Staging of syphilis is critical for determining appropriate treatment but can be complex and requires knowledge of lab results and patient history. Healthcare providers planning to treat syphilis patients in their own facilities should review the following guidance. *Note: Additional information regarding syphilis can be*

found at Syphilis - STI Treatment Guidelines (cdc.gov)

- Penicillin G (Bicillin LA) 2.4 million units IM is the preferred treatment for syphilis. It is the only treatment known to prevent congenital syphilis.
    - The number of Bicillin LA doses is determined by the stage of syphilis:
        - Primary, Secondary and Early Latent syphilis is treated with one dose.
        - Late syphilis or syphilis of unknown duration is treated with 3 doses given at one-week intervals.
    - Pregnant individuals with a penicillin allergy should be referred to an allergist for desensitization to allow treatment with Bicillin LA.
    - Doxycycline is an alternative treatment for non-pregnant individuals allergic to penicillin.

***Special Note: Ongoing Bicillin L-A Shortage (Benzathine Penicillin G)**

Due to ongoing national supply constraints, Bicillin L-A (benzathine penicillin G) availability remains limited and is being distributed through wholesaler allocation. In its January 21, 2026 supply update, Pfizer reported continued allocation with estimated recovery for key prefilled syringe presentations in Q4 2026, with next deliveries projected beginning July 2026 (adult presentations). National shortage tracking also continues to list benzathine penicillin G products as in shortage due to increased demand.

Clinical prioritization recommendations (during constrained supply):

- **Prioritize Bicillin L-A for pregnancy and congenital syphilis.** CDC emphasizes that penicillin is the only recommended treatment for syphilis in pregnancy and for infants with congenital syphilis; therefore, available Bicillin L-A should be reserved for these priority populations whenever possible.

- **Avoid using Bicillin L-A for non-syphilis indications** when acceptable alternatives exist (e.g., substitute therapies for other infections) to preserve supply for syphilis treatment.

- **Do NOT substitute Bicillin C-R for Bicillin L-A.** Bicillin C-R is not an appropriate alternative for syphilis treatment.

- For non-pregnant patients: When Bicillin L-A is not available, doxycycline is an acceptable alternative for many patients, consistent with national guidance used during the shortage:

    - Early syphilis (primary/secondary/early latent): doxycycline 100 mg PO BID x 14 days
    - Late latent or unknown duration: doxycycline 100 mg PO BID x 28 days
      Ensure counseling on strict adherence and arrange close serologic follow-up.

- Penicillin allergy in pregnancy: Pregnant patients with a penicillin allergy should be referred for desensitization so they can receive penicillin-based therapy.

MSDH encourages providers to monitor on-hand inventory closely, plan ordering proactively where possible, and coordinate with local partners/health departments for referral options when Bicillin L-A access is limited. U.S. Food and Drug Administration communications and shortage updates may change as supply stabilizes.

Prevention

Doxycycline post-exposure prophylaxis (DoxyPEP) is a prevention option that some patients can use to reduce the chance of acquiring certain bacterial STIs after sex. The Centers for Disease Control and Prevention recommends clinicians counsel and offer DoxyPEP to patients who meet CDC eligibility criteria—such as those with a documented bacterial STI (syphilis, chlamydia, or gonorrhea) in the past 12

months and ongoing risk—using shared decision-making. When prescribed, the CDC-recommended regimen is doxycycline 200 mg as soon as possible and within 72 hours after sex, not exceeding 200 mg in a 24-hour period, and paired with routine follow-up testing.

Patient education remains essential because STI prevention works best as a layered strategy, not a single intervention. Providers should routinely offer clear, practical counseling on prevention options (e.g., correct and consistent condom/barrier use, reducing exposure risk, timely testing after possible exposure, vaccination when indicated, and linkage to HIV PrEP/PEP when appropriate), along with guidance on when to seek care for symptoms. For patients using DoxyPEP, reinforce baseline testing and repeat STI screening every 3–6 months, medication adherence, and periodic reassessment to confirm it remains appropriate.

For more information, please visit the CDC website regarding Postexposure Prophylaxis for HIV and STIs.

Reporting

- Syphilis (including congenital syphilis) is a Class 1B reportable disease and is reportable to MSDH within 1 business day. (Reports can be called to the MSDH STD/HIV Office at 601-576-7723.)
- The MSDH Office of STD/HIV follows up with each case of syphilis to ensure they complete treatment and to identify, test, and treat contacts when applicable.
- **Healthcare providers who do not have Bicillin LA in stock for priority patients may refer these patients with positive (and confirmed) syphilis laboratory testing to MSDH for treatment and follow-up.**
    - **Healthcare providers should call the local health department clinic to refer positive patients for follow-up appointments and treatment.**
    - **Laboratory testing for referred patients must be provided to the health department clinic to ensure appropriate follow-up and treatment. (e.g. faxed to the clinic or a copy sent with the patient).**

Individuals with syphilis are at increased risk of HIV infection, and individuals with HIV are at increased risk of syphilis. The MSDH Ryan White Program reaches out to all individuals with a new diagnosis of HIV to determine eligibility for Ryan White services and refer patients to care. If you identify a patient with new HIV infection or a patient with a history of HIV who is out of care, please contact the MSDH Office of STD/HIV at 601-576-7723.