DEPARTMENT OF HEALTH

Congenital Syphilis in Minnesota: Recommendations to Reach Elimination

2025-2026 MINNESOTA DEPARTMENT OF HEALTH CONGENITAL SYPHILIS REVIEW BOARD

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Congenital Syphilis in Minnesota: Recommendations to Reach Elimination

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Introduction

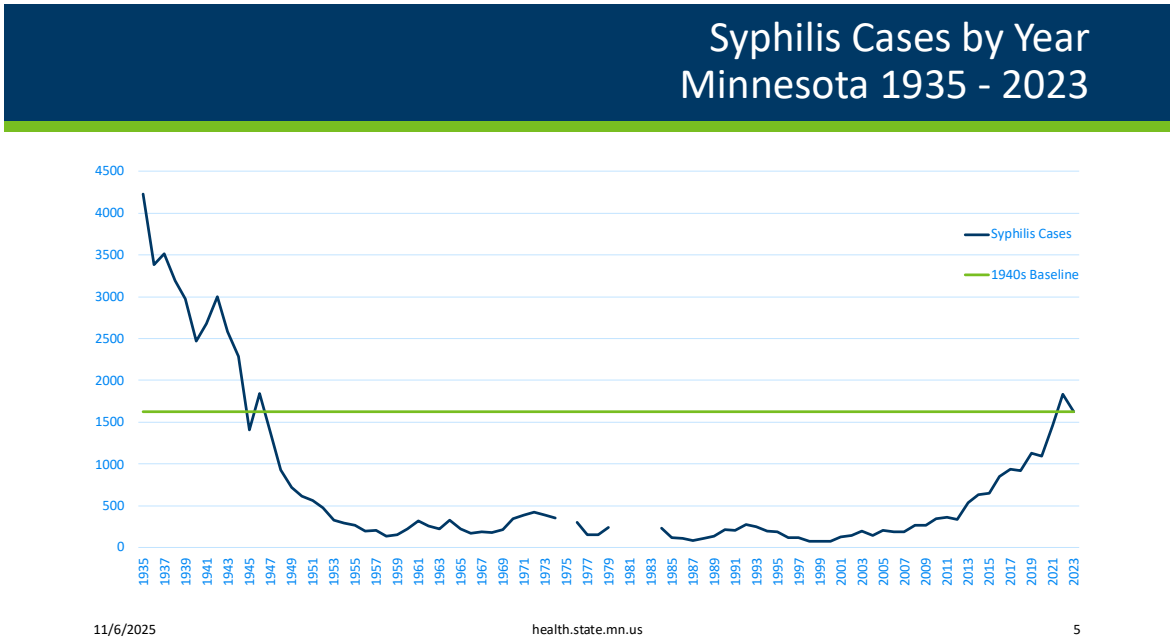
Syphilis

Syphilis is a sexually transmitted infection (STI) that can cause serious health problems without treatment. Infection develops in stages (primary, secondary, latent, and tertiary). Each stage can have different signs and symptoms.

Babies can also get syphilis. Congenital syphilis is the disease that happens when women pass syphilis to their babies during pregnancy. Syphilis is curable with the right antibiotic, usually penicillin.

Congenital syphilis trends in Minnesota

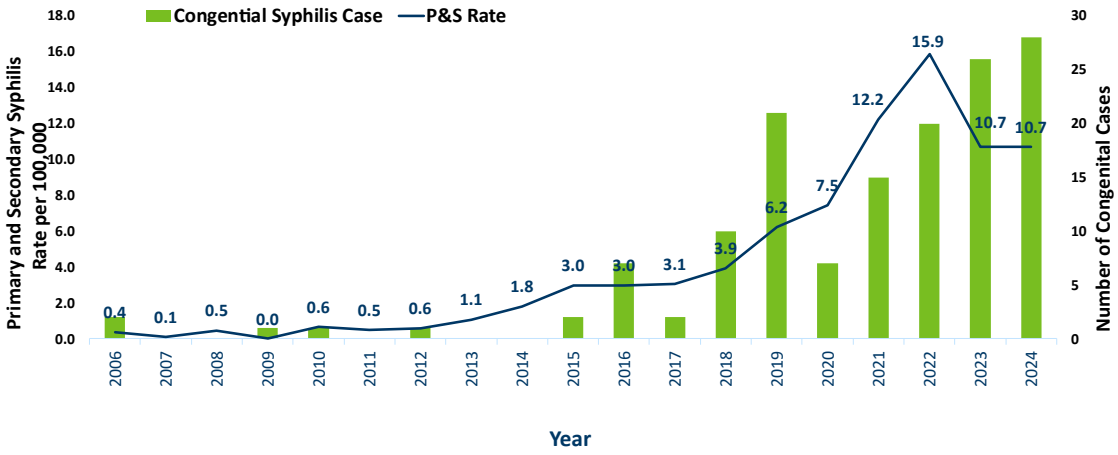
Minnesota has experienced an increase in syphilis over the past decade, mirroring nationwide syphilis trends. Early syphilis cases (defined as primary, secondary, and early latent stages) among females in Minnesota increased 534% in the past decade, which correlates with the increased number of congenital syphilis cases over this timeframe. Although syphilis is most contagious in its early stages, pregnant cases with late latent or syphilis of unknown duration can still transmit infection to their unborn child.



Source: STI Statistics - 2023 (https://www.health.state.mn.us/diseases/stds/stats/2023/index.html)

In 2024, there were 29 cases of congenital syphilis reported in MN -- the highest in more than 40 years. Notably, in 2013 and 2014 there were zero cases of congenital syphilis in Minnesota. Congenital syphilis can result in severe pregnancy complications, fetal death, or severe harm to the infant. Congenital syphilis is preventable with timely screening and treatment.

Primary and Secondary Syphilis Rates among Females aged 15-44 years and Number of Congenital Syphilis Cases – Minnesota, 2006-2024



Source: STI Statistics - 2023 (https://www.health.state.mn.us/diseases/stds/stats/2023/index.html)

Syphilis can affect anyone and Minnesotans of all races, ethnicities, gender, and sexual orientation have been impacted. However, syphilis and congenital syphilis disproportionately affects communities that experience other health disparities due to historical inequities and a combination of factors affecting social and structural determinants of health, including American Indian, Black, and Hispanic communities in Minnesota. These communities have experienced historical, current, and intergenerational trauma, structural and individual racism, discrimination, differences in health insurance coverage, housing, employment status, and access to preventive, screening, and curative services.

MDH syphilis screening recommendations in pregnancy

In 2024, due to the rising rate of congenital syphilis in Minnesota, MDH developed updated syphilis screening recommendations during pregnancy. These recommendations can be found at Syphilis Information for Health Professionals (www.health.state.mn.us/diseases/syphilis/hcp/index.html).

MDH recommends screening three times during pregnancy with syphilis serology:

- At the first prenatal encounter
- Early in the third trimester (28-32 weeks' gestation)
- At delivery.

MDH strongly encourages both non-treponemal and treponemal testing to be performed during pregnancy and is available for consultation to assist with interpreting test results.

Some people may not access prenatal care during pregnancy. Because they may miss this opportunity for care, screening for syphilis should be considered in other health care settings.

MDH recommends providers screen during pregnancy in any health care setting (not limited to prenatal care), including emergency departments, urgent care centers, correctional facilities, substance use treatment facilities, and primary care clinics.

MDH community-based syphilis screening recommendations

In 2024, to reduce community levels of syphilis, MDH recommended all individuals aged 18-49 years be screened (tested) for syphilis, using an opt-out approach, at least once as part of routine health care. More information can be found at Syphilis Information for Health Professionals (www.health.state.mn.us/diseases/syphilis/hcp/index.html)

Additionally, MDH recommends screening all individuals with risk factors more frequently, including those with substance use, incarceration, or unstable housing; if sexually active with new partners since last screening; and those with transactional sex.

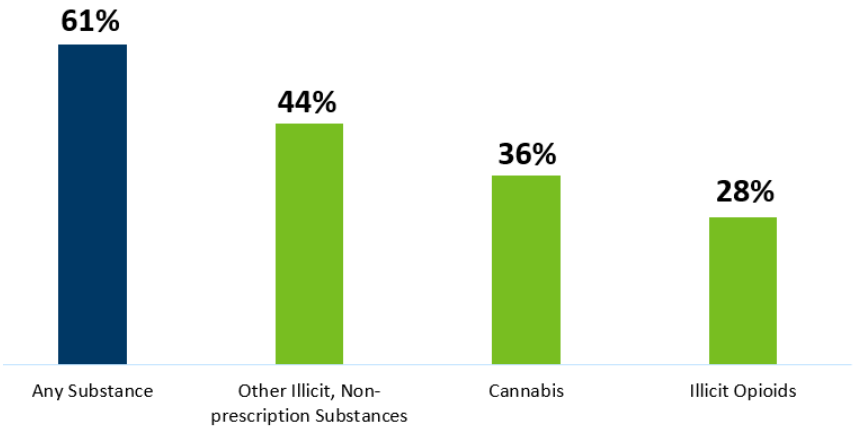
MDH recommends providers screen for syphilis in any health care setting, including primary care clinics, correctional facilities, and substance use treatment facilities. Consider screening in emergency departments or urgent care settings that care for high-risk populations, have high local rates of syphilis, or for a patient with limited healthcare access.

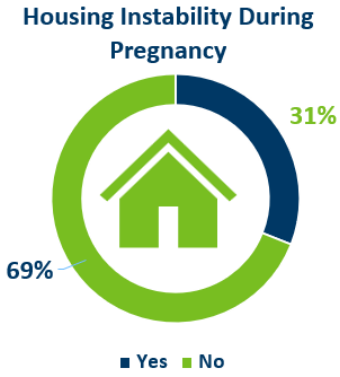
Screening recommendations during pregnancy	Screening recommendations for everyone (18-49)
Screen for syphilis three times during each pregnancy 1. At first prenatal encounter 2. Early in third trimester 3. At delivery	▪ Opt-out screening, at least once, as part of routine health care ▪ Screen more frequently and under 18 and 50 years of age and older if sexually active and based on risk factors

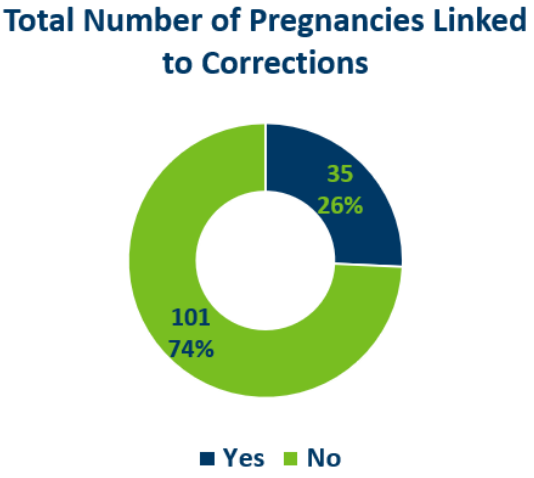
MDH congenital syphilis enhanced surveillance

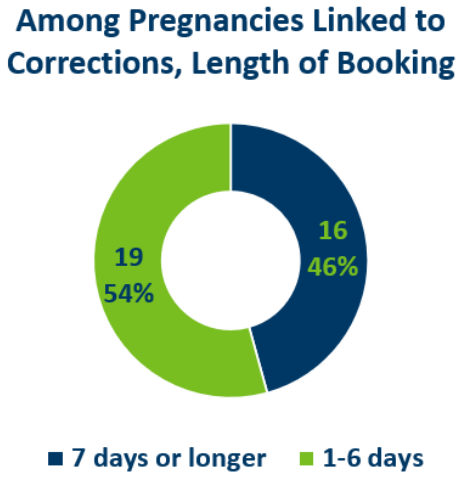
MDH performed enhanced surveillance for congenital syphilis using the Surveillance for Emerging Threats Network (SET-NET) methodology to better understand missed opportunities for prevention and timely adequate care.

Beginning in 2024, medical chart abstractions are performed for both the parent and the infant with congenital syphilis and are linked to birth certificate data. Among those with a pregnancy linked to a case of congenital syphilis, additional data were abstracted on substance use, co-morbidities, and housing history. These pregnancies were matched with the Minnesota Jail Detentions file to better understand coexisting challenges, interactions with corrections facilities, and prevention and treatment opportunities. Most of the women had interactions with the health care system, allowing opportunities for detection and treatment. Notably, 53% had four or more prenatal visits. There were high rates of housing instability, substance use, and incarceration in this group.









Among women with congenital syphilis births:

- 60% had more than seven health care visits during pregnancy, with a median of 8.5 visits
- Over 60% used substances during pregnancy
- 69% experienced housing instability
- 26% of pregnancies had at least one jail booking

Congenital Syphilis Review Board (CSRB)

2024 CSRB expansion

- MDH recruited new members to the CSRB in 2024 to better understand the complex factors contributing to the increases in syphilis in Minnesota and identify opportunities to reduce congenital syphilis rates.

- MDH sought new CSRB members from across the state with a wide range of backgrounds and skills.

CSRB purpose

- The purpose of the CSRB is to provide recommendations to reduce the incidence and burden of congenital syphilis in Minnesota.
- The CSRB serves as an independent, impartial board and assists MDH staff in determining important activities and priorities to reduce congenital syphilis rates and support pregnant women in accessing resources and treatment. The group may also assist in evaluating the overall effectiveness of current intervention models and programs. This work includes efforts to:
    - Review and monitor aggregate data and trends to help identify important missed opportunities and potential interventions
    - Serve as a liaison, gather input from relevant constituencies, and provide feedback from community leaders to MDH
    - Provide technical expertise
    - Suggest key audiences and messaging approaches for recommendations and information

CSRB structure and support

- The aim of the CSRB meetings is to discuss challenges, find solutions, and collaborate.
- CSRB members attend meetings every other month. Personally identifiable information (PII) about patients or cases is not shared in the CSRB. General concerns are shared without PII.

CSRB member representation

- Members represent local and Tribal public health, statewide health care providers representing sexually transmitted infection clinics, Native American health care, obstetrics, pediatric infectious diseases, maternal-fetal medicine, nurse midwifery, and emergency medicine, and representation from settings including:
    - Federally qualified health care centers, field-based disease intervention specialists (DIS), and community-based organizations for people experiencing housing instability.
- CSRB membership also includes experts in health equity, syphilis laboratory medicine, pharmacy, infection prevention, health systems care delivery, and in the care of women using substances during pregnancy.
- The CSRB additionally includes staff across programs in MDH focused on congenital syphilis, sexually transmitted infections, epidemiology, the Surveillance for Emerging Threats Network (SET-NET), perinatal HIV, people experiencing homelessness, correctional health, substance use disorders, Tribal health, maternal child health, and health equity.

- A MDH CSRB Support Team of additional MDH staff across programs and sections meets bi-monthly and further supports the work of the CSRB.

CSRB mission, goals, and objectives

CSRB vision

The CSRB vision is to eliminate congenital syphilis in Minnesota.

CSRB goal

The CSRB goal is to decrease congenital syphilis cases to zero cases per year.

Stakeholders for CSRB recommendations

- Health care providers (obstetrics and gynecology, midwives, doulas, pediatrics, STI providers, infectious diseases, family medicine providers, emergency medicine, pharmacists, and more)
- Health care systems
- Policymakers locally, statewide, and nationally
- Tribal public health and Native American health care clinics
- Local public health and public health STI clinics
- Community-based organizations
- HIV prevention grantees, including pre-exposure prophylaxis (PrEP) sites, and syringe service programs (SSPs)/harm reduction sites
- Corrections (with a focus on jails)
- Substance use treatment programs, including those with housing support
- Community members

Promoting a coordinated approach to syndemics

Syndemics are epidemics of diseases, such as viral hepatitis, STIs, substance use, and behavioral issues, that interact with each other. These interactions increase the adverse effects on the health of individuals and communities. In addition, social determinants of health, such as racism, prejudice, and poverty, interact with syndemic conditions.

Addressing intersecting conditions and social determinants of health collectively can result in better syphilis prevention, testing, and care and improved health. In addition, a coordinated approach to syndemics can improve implementation of recommendations by the health care provider and at the local public health level, as they do not treat one disease, rather they serve the whole person and community to improve wellness. A syndemic approach can be cost effective, as siloed diseases and funding streams are leveraged to enhance integrated prevention and care.

The CSRB aims to address congenital syphilis in MN through a syndemic approach across all aspects of disease prevention, testing, and public health surveillance and action, to improve whole person care and community wellness.

CSRB guiding principles

- Prioritize action-oriented recommendations
- Promote a syndemic approach to testing and provision of support services
- Consider implementation---but include aspirational recommendations
- Maintain a health equity perspective throughout
- Identify lead roles for specific recommendations and determine champions
- Discuss what support is needed

From surveillance to solutions

Goal: Decrease congenital syphilis cases to zero per year

- **Objective 1:** Increase syphilis testing and treatment during pregnancy
- **Objective 2:** Decrease community syphilis rates overall
- **Objective 3:** Enhance resources and financial support for interventions that reduce syphilis
- **Objective 4:** Raise awareness and reframe messaging around STIs and substance use to address stigma and barriers
- **Objective 5:** Collaborate with and leverage existing programs to support people with syphilis
- **Result:** Syndemic, whole person approach

Objective 1: Increase syphilis testing and treatment during pregnancy

Increasing syphilis screening and testing in pregnancy allows for timely treatment with the goal of preventing congenital syphilis.

Strategy 1a: Increase obstetric provider awareness of syphilis trends and MDH recommendations to screen three times during pregnancy

- Distribute and publicize MDH Pregnancy Syphilis Screening Recommendations and FAQs (www.health.state.mn.us/diseases/syphilis/screenrecfaq.pdf) and MDH Pregnancy Syphilis Screening and Treatment Guide (www.health.state.mn.us/diseases/syphilis/screentreatguide.pdf) for use in health care settings caring for those who are pregnant including obstetricians, family practice providers, midwives, doulas, Tribal public health/Native American health centers, and correctional health.
- A syndemic whole patient approach is recommended during pregnancy. This includes screening for syphilis at the first prenatal encounter along with HIV, hepatitis B, and hepatitis C. A second HIV test during the third trimester should be considered, along with third trimester syphilis screening, for all pregnancies. Finally, along with delivery syphilis screening, rapid HIV testing should be performed during labor for anyone with undocumented HIV status at delivery.
    - Clinician's Guide to Routine HIV Testing During Pregnancy 2019 (https://www.health.state.mn.us/diseases/hiv/hcp/perinatal/hivtestpreg.pdf).
- Encourage syphilis and HIV screening as early as possible, at the time of pregnancy test or pregnancy diagnosis, rather than waiting to screen at the 12 week first prenatal visit.
- Educate providers on partner testing and treatment guidelines and encourage partner linkage to care.
- Develop and disseminate provider resources to support partner notification, testing and treatment.

- Provide webinars and grand rounds presentations, live and on-demand, with updates and guidance for providers who may have limited experience with syphilis.
- Encourage health care sites to evaluate and monitor screening rates among those who are pregnant and aim for >90% screening three times during each pregnancy.

Strategy 1b: Enhance automated processes to support health care provider implementation of syphilis screening three times in pregnancy

- Promote the addition of syphilis screening to all prenatal laboratory panels.
- Support health system level opportunities by promoting syphilis and HIV screening using electronic health record (EHR) modifications, such as order sets and best practice alerts (BPAs) to improve clinical care. These modifications can be linked to:
  - Pregnancy testing, or
  - Add syphilis screening to STI screening order sets (e.g., *Neisseria gonorrhea* or chlamydia), or
  - Positive results or upon initiating treatment for N. gonorrhea or chlamydia
- When developing EHR best practice alerts and order sets consider a syndemic approach for HIV, STIs, and hepatitis B, and hepatitis C.
- Create a CSRB working group to develop model templates for EHR order sets and best practice alerts for syphilis screening, which can be adapted to different sites to enhance implementation of syphilis screening in pregnancy. The work group can identify if there are current best practices, models, or examples available, or for similar screenings, and modify for the setting.

Strategy 1c: Increase syphilis testing and treatment in nontraditional settings

- Distribute pregnancy-related syphilis resources specifically developed for health care providers in nontraditional settings, including those providing care to affected populations in emergency medicine, substance use treatment, harm reduction, correctional health, maternal child health, and mobile medical settings.
- Distribute the MDH Pregnancy Syphilis Screening Recommendations and FAQs (www.health.state.mn.us/diseases/syphilis/screenrecfaq.pdf) and MDH Pregnancy Syphilis Screening and Treatment Guide (www.health.state.mn.us/diseases/syphilis/screentreatguide.pdf) for use in emergency department, mobile, and other nontraditional settings.
- Encourage use of EHR best practice alerts and order sets for health care providers in different settings where people are cared for during pregnancy, beyond obstetric practices, including in emergency department and primary care settings.
- Collaborate with health and community partners who reach pregnant people who may be difficult to reach within traditional health care settings.

Strategy 1d. Develop standing orders for syphilis testing and treatment

- Develop standing orders for syphilis testing and treatment, which can facilitate testing and treatment in nontraditional and community-based settings. Evaluate models and best practices available and adapt for local regulations and settings.

Objective 2: Decrease community syphilis rates overall

To reduce congenital syphilis, a reduction in overall community rates is required to decrease syphilis cases during pregnancy.

Strategy 2a: Increase health care provider awareness of increased rates of syphilis and implementation of MDH recommendations for screening all people aged 18-49 years at least once

- Universal screening, as recommended, has less bias than risk-based screening, and can be implemented to reduce community rates overall.
    - Syphilis Screening Recommendations for Nonpregnant People (https://www.health.state.mn.us/diseases/syphilis/screenrec.pdf)
- Improve clinical care and screening through the addition of EHR order sets and best practice alerts (as above).
- An evaluation of site specific, regional, or statewide uptake of the 2024 MDH syphilis screening recommendations should be performed to better understand implementation, gaps, and areas of focus for improved screening among adults.

Strategy 2b: Increase testing opportunities

- Increase mobile testing and treatment options for populations less likely to visit a traditional clinic setting.
- Engage with the Minnesota Mobile Medical Interest Group to support mobile health syphilis screening across the state, with a focus on rural and hard to reach communities.
- Promote Local Public Health (LPH) and Tribal Public Health (TPH) engagement to assist with connecting cases to treatment.
- Develop and distribute MDH community-based recommendations for syphilis and HIV rapid testing and treatment guidance for high-risk populations:
    - LPH and TPH testing and treatment in community-based settings
    - Mobile health settings
    - Similar guidance can be developed for
    - Health care settings for those experiencing housing instability
    - Emergency department screening and treatment
    - Substance use treatment programs
    - Correctional health, with a focus in jails

Strategy 2c: What does it take to get to zero cases?

Through the Minnesota Analytics and Disease Modeling Center (MADMC) collaboration, the University of Minnesota and MDH evaluated strategies with the most impact on reducing congenital syphilis. Adapting an approach developed by the California Department of Public Health, the MADMC analyses emphasized the importance of reducing overall community syphilis rates to reduce congenital syphilis.

- Continue MADMC collaboration to evaluate uptake of syphilis screening in different settings, among different populations, to determine a path to the elimination of congenital syphilis with and without reduced community syphilis rates
- Enhance MADMC analyses to incorporate cost-benefit analyses

Strategy 2d: Promote DoxyPEP access and use

DoxyPEP has been shown to decrease the incidence of syphilis, chlamydia, and gonorrhea among men who have sex with men (MSM) and transwomen (TGW), with and without HIV, who have a history of STIs. DoxyPEP should be considered for all MSM and for TGW who have had more than one bacterial STI in the past 12 months.

- Provide education to health professionals around DoxyPEP guidelines.
- Encourage a shared decision-making approach for all non-pregnant individuals at increased risk for bacterial STIs and for those requesting DoxyPEP.
- Continue to monitor risks/benefits from a syndemic perspective, including ongoing monitoring for the development of antimicrobial resistance (e.g., gonorrhea cases, disseminated gonorrhea infections).

Objective 3: Enhance resources and financial support for interventions that reduce syphilis

Substantial resources and policy requests to address the rise in syphilis in MN are essential to address this continued threat to our communities. It is essential to fund and advocate for resources for interventions that seek to disrupt syphilis infections and transmission in the community. When possible, leverage resources across organizations to support collaborative approaches.

Strategy 3a. Improve Disease Intervention Specialists (DIS) funding

- DIS are a well-established and critical public health intervention, however, funding has decreased over recent years and DIS are not able reach all syphilis cases. Prioritization of those who are pregnant and those with the most infectious forms of syphilis (primary and secondary) are necessary approaches for understaffed DIS teams nationally.
- Having DIS support to link to care, decrease infectiousness, and decrease community spread are effective approaches to reduce syphilis rates in communities and are essential investments to prevent congenital syphilis.
- Consider strategies to incorporate DIS funding into stable, state-level funding.

- Work with local and Tribal public health partners to advocate for stable DIS funding.
- Explore regional and collaborative models to leverage DIS expertise across the state.

Strategy 3b. Maintain incentives for screening/testing and treatment

- The provision of rapid syphilis test kits (or rapid dual HIV/Syphilis test supplies) has been critical to supporting expanded screening in high-risk populations.
- Incentives have been shown to improve STI and HIV screening uptake and linkage to care. It is essential to continue to have funding sources for syphilis, STI, hepatitis, and HIV screening, particularly among high-risk, hard to reach communities.

Strategy 3c. Increase harm reduction funding, including syringe service providers and safe drug use sites

- Given the overlapping issues of substance use and syphilis, it is essential that substance use is addressed directly.
- Implement syphilis screening and linkage to care in harm reduction sites.
- Advocate for enhanced funding for holistic care approaches to fit patient needs.

Strategy 3d. Support implementation of 340b pricing for syphilis treatment with bicillin

- Share best practices for 340b enrollment with LPH, TPH, and jails to ensure under-resourced settings where care is provided to high-risk communities can afford to treat syphilis.

Objective 4: Raise awareness about syphilis and reframe messaging around STIs and substance use to address stigma and barriers

Strategy 4a. Provide education, including related to substance use reporting requirements in pregnancy

- Provide outreach and education to health care workers regarding substance use reporting requirements in pregnancy, and leverage existing webinars and education.
    - Current reporting requirements in MN recognize that mandatory reporting of substance use during pregnancy may present a barrier for care. In July 2021, MN statute was updated to state providers are not required to report the use of controlled substances for non-medical purposes at initial identification.
    - Leverage existing efforts for enhanced education on substance use in pregnancy, including trainings and webinars for providers.
    - Encourage substance use treatment during pregnancy and work to leverage current resources and partnerships to support this objective.
- Support the recommendations of the Task Force on Pregnancy Health and Substance Use Disorders (December 2024). This task force recommended protocols for providers related to requirements for reporting prenatal exposure to a controlled substance.

- MDH Task Force Recommendations December 2024 (PDF) (www.health.state.mn.us/people/womeninfants/womenshealth/tfpsud/preghealth.pdf)

Strategy 4b. Communications to the public to challenge myths about STIs and substance use

- Encourage messaging that reduces stigma, incorporates trauma-informed approaches and recognizes the complexity of substance use disorders.
- Consider community-based organizations and other advocates who can promote messaging and work to encourage testing and treatment among populations who may feel stigmatized.
- Ensure messaging addresses multiple population subgroups and uses several different approaches (e.g., social media, traditional media, radio).
- Create communication "Tool Kits" that can be used for cross-promotion, for example STI awareness with various groups, such as Birth Defects Prevention Network or Jail Nursing conference. These tool kits could include lanyards, coasters, notepads, and rapid testing kits.

Strategy 4c. Modernize public health efforts to reach people where they are, including on social media platforms

- Develop Internet Partner Services protocols and best practices for outreach via social media and other apps, for example, pregnancy-related resources.
- Leverage the ability of partners, such as local and Tribal public health, as well as STI clinics and other community-based organizations, to use these platforms to reach a broader audience.

Objective 5: Collaborate with and leverage existing programs to support people with syphilis

Strategy 5a. Enhance local partnerships to support people with syphilis during pregnancy

- Implement a syndemic approach with statewide, collaborative efforts for outreach, education, and local partnerships between perinatal hepatitis B, perinatal HIV, and congenital syphilis prevention efforts.
- Engage with LPH and TPH family home visiting and WIC to leverage resources and enhance infant and parent follow-up.

Strategy 5b. Advocate for increased access to substance use disorder treatment programs for people who are actively using during pregnancy

- Review the CA DPH: A Prenatal Care Model for Congenital Syphilis Prevention: The Pregnancy Connections Clinic Guide (PDF)

(https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/Pregnancy-Connections-Clinic-Guide.pdf)

- Expand 340b enrollment by jails for on-site treatment
- Provide resources to enhance linkage to care between jails, DIS, and local and Tribal public health.
- Leverage resources with the MDH mobile health consortium.
- Increase access to non-judgmental prenatal care, especially for people using substances.
    - Incorporate STI screening and treatment into comprehensive, residential substance use treatment centers. This could be done in partnership with mobile health initiatives and/or local and Tribal public health partners.
    - Advocate for sustained funding for residential, comprehensive, substance use treatment centers.

Strategy 5c. Enhance collaboration with corrections, specifically jails, to support best practices for testing and treatment in jail health programs.

- Collaboration with stakeholders including the Board of Correctional Health, jails, and county officials and Sheriffs.
- Provide resources to jails on best practices for STI testing and treatment and enrollment in 340b to support that work.
- Develop model templates based on successful jail health programs that currently implement testing and treatment.
- Enhance partnerships between jails and local and Tribal public health to support testing and treatment in facilities as well as follow-up after release.
- Develop correctional health rapid testing pilots and shared best practices.

Implementation

In 2026, MDH and the CSRB will begin implementation of these recommendations to reduce congenital syphilis in Minnesota using these strategies as a guide. This framework will support coordinated, collaborative efforts across the state. Each CSRB meeting will review an objective and strategies in depth, including distinct data to action items. Additionally, this will include development of workgroups (as needed), timelines, lead, active members, and development and implementation of activities.

Initial discussion of low and high priority and feasibility of recommendations was initiated and charted. Overall, the group did not identify any low priority recommendations.

PRIORITY LEVEL	HIGH FEASIBILITY	LOW FEASIBILITY
HIGH PRIORITY	▪ Promote screening recommendations ▪ Develop recommendations for EHR order sets and best practice alerts and/or models and best practices ▪ Recommendations for broad testing in non-traditional settings (education, best practices) ▪ Education for health care workers regarding substance use reporting requirements	▪ Implementation of EHR modifications as significant development required ▪ Implementation of broad testing in non-traditional settings, mobile units, and treatment in community-based settings ▪ Maintain and increase funding for STI intervention efforts, including DIS and testing ▪ Support Task Force Recommendations ▪ Support jail health in improving syphilis screening and treatment

Reducing congenital syphilis in MN requires a comprehensive, collaborative approach. Given limited resources, it is imperative that successful models are identified and highlighted, and existing programs are leveraged as much as possible. Some might believe the CSRB goal of zero per year is aspirational---but given very low rates of congenital syphilis as recently as 2017—it is a worthy goal. MN infants deserve a healthy start to life and the work of the CSRB and community partners are critical to reversing current trends and promoting a healthy start.

Resources

- Syphilis in Pregnancy and Congenital Syphilis (https://www.health.state.mn.us/diseases/syphilis/hcp/healthcarewomen.html)
- Syphilis Information for Health Professionals (https://www.health.state.mn.us/diseases/syphilis/hcp/index.html)
- Substance Use Reporting Guidance Update (https://mnpqc.org/mandatory-reporting-legislative-update/)