National Center for HIV, Viral Hepatitis, STD, and TB Prevention Division of STD Prevention



SYPHILIS IN PREGNANCY

ADDRESSING THE CONGENITAL SYPHILIS CRISIS

Fanta Drame, MPH | Kate Miele, MD, MA, FACOG | Phoebe Thorpe, MD, MPH

CityMatCH Webinar May 21st

DISCLOSURES

NONE

The findings and conclusions in this presentation are those of the presenter and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



LANGUAGE DISCLAIMER

- Race and ethnicity are real but are social rather than biological constructs.
- Any differences due to race an ethnicity described here should not be interpreted as due to a biological cause, but rather are a result of systemic inequities and disparities linked to race and ethnicity.
- Pregnant person and birthing parent are used throughout to denote persons who are or have been pregnant.
- Where "maternal" is used as an adjective, it should be understood to denote features of the birthing parent, agnostic to gender and gender identity.





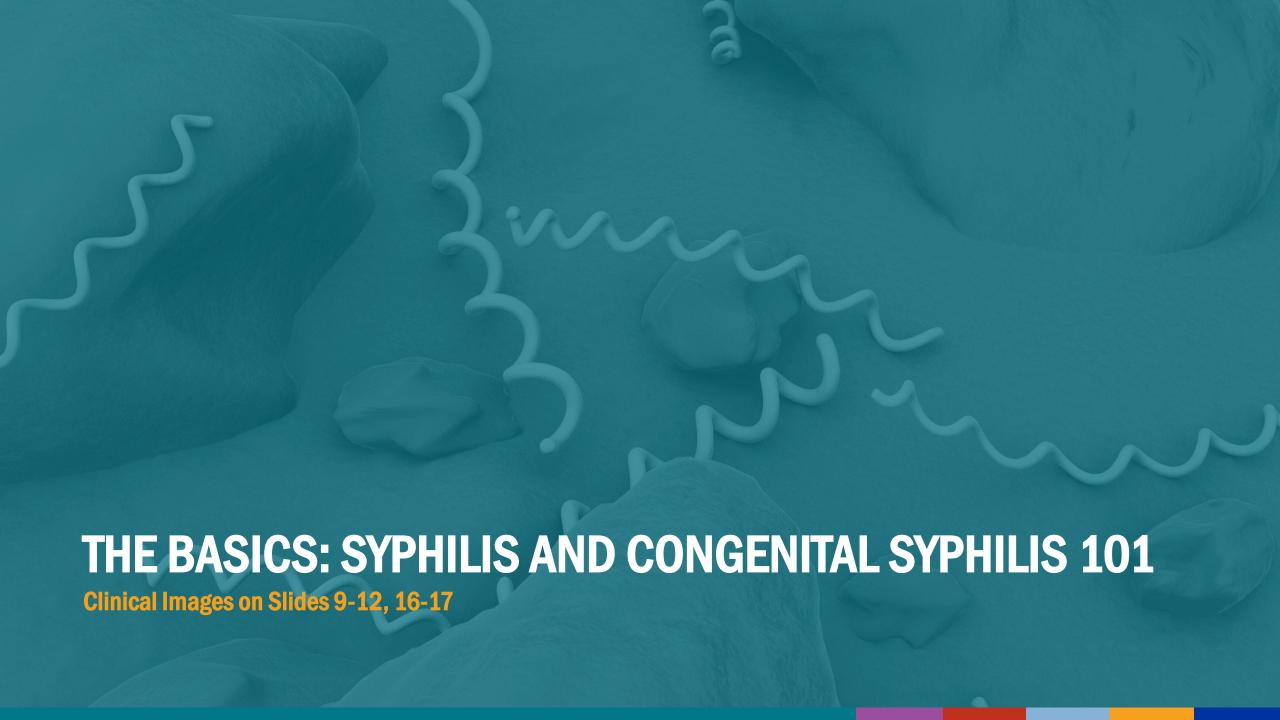
JOIN BY WEB: PollEv.com/robmcdonald667

JOIN BY TEXT: Send robmcdonald667 and your message to 37607



Nobody has responded yet.

Hang tight! Responses are coming in.



How aware are you of the nationwide increases in syphilis cases?

Not familiar - I didn't even know syphilis was still an issue

0%

Somewhat Familiar - I have some idea of what's going on

0%

Very familiar with the syphilis increases happening nationwide

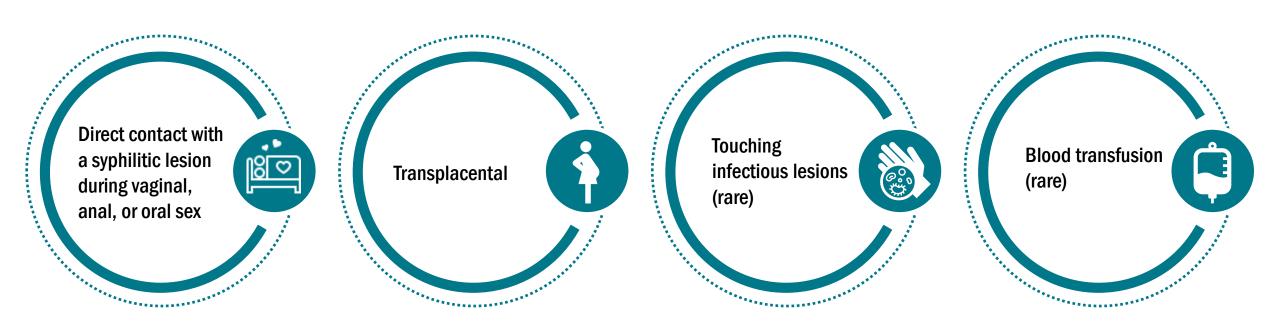
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WHAT IS SYPHILIS?

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

Syphilis is a sexually transmitted infection (STI) caused by spirochete bacterium *Treponema pallidum*. It can lead to serious health problems without treatment. Infection develops in stages (primary, secondary, latent, and tertiary). Each stage can have different signs and symptoms.

Syphilis can be transmitted by:





COMPLICATIONS OF UNTREATED SYPHILIS

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101



Neurosyphilis/Ocular Syphilis/Otosyphilis

- Stroke
- Meningitis
- Blindness
- Hearing loss



Congenital Syphilis (Transplacental Transmission)

- Miscarriage
- Stillbirth
- Neonatal death



Increased HIV Acquisition/Transmission



THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

IMPORTANT POINTS

- 1 Syphilis goes though several stages.
- Clinical stages and surveillance definitions are different.
- Neurosyphilis, ocular syphilis, and otosyphilis can happen any time.



THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary Secondary Latent Tertiary



THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary

Painless ulcer (chancre)

Secondary

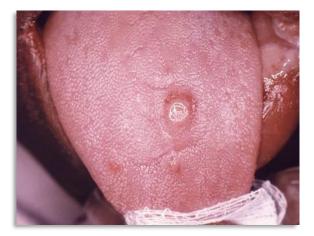
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Tertiary

- Appears about 3 weeks (range: 10-90 days) after infection
- Sore goes away even if person is not treated











THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary



Secondary

Rash
Lymphadenopathy
Fever/Fatigue

atent

- 101
- Usually occurs 3-6 weeks after primarySymptoms go away even if not treated.
- Symptoms can include:
 - Headache
 - Alopecia
 - Mucocutaneous lesions
 - Condyloma lata

- Malaise
- Anorexia
- Sore throat
- Myalgia











THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary

Secondary

- ondary
- The latent stage of syphilis is a period when there are no visible signs or symptoms.
- Without treatment, you can continue to have syphilis in your body for years.

Latent

No Symptoms

EARLY LATENT
 <=1 year
since infection</pre>

>1 year since infection

Tertiary



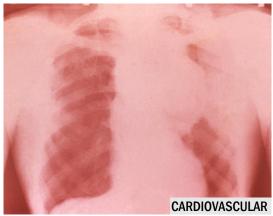
THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Tertiary

- Can affect and damage many different organ systems. These include the heart and blood vessels, and the brain and nervous system
- Occurs 10–30 years after infection began







Cardiovascular, **Gummatous lesions** (skeletal, mucosal, skin)



THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary

Painless ulcer (chancre)

Secondary

Rashes
Mucocutaneous
lesions
Lymphadenopathy

Latent

No Symptoms

EARLY LATENT <=1 year since infection

LATE LATENT >1 year since infection

Tertiary

Cardiovascular, Gummatous lesions (skeletal, mucosal, skin)

Primary and secondary syphilis are the most infectious stages, and are the leading edge of the syphilis epidemic.

Tertiary
10-30 years
since infection

EARLY SYPHILIS

Primary, Secondary or Early Latent Greatest potential for transmission



THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary

Painless ulcer (chancre)

Secondary

Rashes Mucocutaneous lesions Lymphadenopathy

Primary and secondary syphilis are the most infectious stages, and are the leading edge of the syphilis epidemic.

Latent

No Symptoms

EARLY LATENT <=1 year since infection

LATE LATENT >1 year since infection

Tertiary

Cardiovascular, **Gummatous lesions** (skeletal, mucosal, skin) **Dementia/Psychosis**

> **Tertiary 10-30** years since infection

EARLY SYPHILIS

Primary, Secondary or Early Latent Greatest potential for transmission

LATE SYPHILIS

Late Latent or Tertiary

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

CLINICAL STAGES

Primary

Painless ulcer (chancre)

Secondary

Rashes
Mucocutaneous
lesions
Lymphadenopathy

Latent

No Symptoms

EARLY LATENT
 <=1 year
since infection</pre>

LATE LATENT >1 year since infection

Tertiary

Cardiovascular,
Gummatous lesions
(skeletal, mucosal, skin)
Dementia/Psychosis

Primary and secondary syphilis are the most infectious stages, and are the leading edge of the syphilis epidemic.

Tertiary
10-30 years
since infection

Neurosyphilis, Ocular Syphilis, and Otosyphilis



How aware are you of nationwide increases in congenital syphilis cases?

Not familiar - What is congenital syphilis?

O%

Somewhat Familiar - I have some idea of what's going on

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Very familiar with the congenital syphilis increases happening nationwide

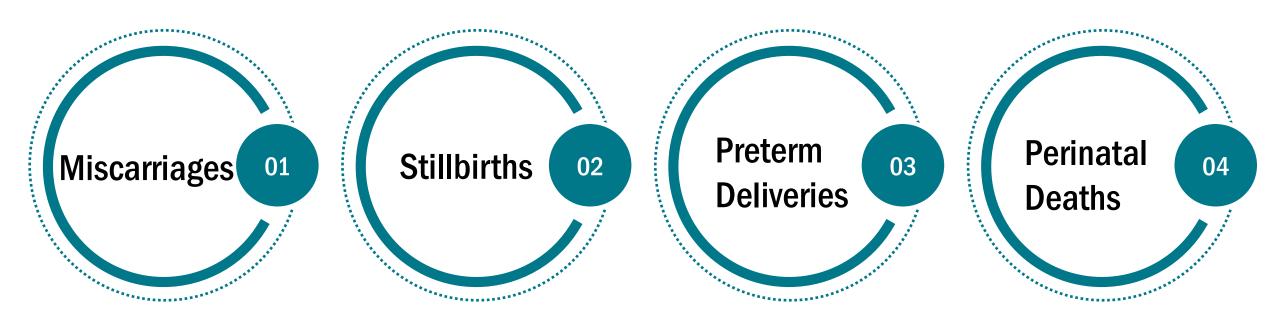
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WHAT IS CONGENITAL SYPHILIS?

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

Congenital syphilis is an infection with *Treponema pallidum* acquired in a fetus when a pregnant person has untreated or inadequately treated syphilis.

Syphilis during pregnancy is associated with:





EARLY CONGENITAL SYPHILIS (UNDER 2 YEARS OLD)

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

If left untreated, congenital syphilis can lead to serious complications.

Most babies are without symptoms!

- Hepatosplenomegaly
- Jaundice
- Rash
- Snuffles
- Bone abnormalities









¹ Catueno, S., Tsou, P.-Y., Wang, Y.-H., Becker, E., & Fergie, J. (2022). Congenital Syphilis and the Prozone Phenomenon: Case Report. The Pediatric Infectious Disease Journal, 41(6), e268-e270. https://doi.org/10.1097/inf.000000000003522

² Arrieta, A. C., & Singh, J. (2019). Congenital Syphilis. *New England Journal of Medicine, 381(22), 2157-2157.* https://doi.org/doi:10.1056/NEJMicm1904420

³ CDC Public Health Image Library - https://phil.cdc.gov/Default.aspx

⁴ Jacobs, K., Vu, D. M., Mony, V., Sofos, E., & Buzi, N. (2019). Congenital Syphilis Misdiagnosed as Suspected Nonaccidental Trauma. Pediatrics, 144(4). https://doi.org/10.1542/peds.2019-1564

LATE CONGENITAL SYPHILIS (OVER 2 YEARS OLD)

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

If left untreated, congenital syphilis can lead to serious complications.

Classic Hutchinson's Triad:

- 1. Complications with eyes
- 2. Deafness
- 3. Complications with teeth
- Skull (saddle nose, frontal bossing)
- Long bones
- Developmental delay







¹ Arrieta, A. C., & Singh, J. (2019). Congenital Syphilis. New England Journal of Medicine, 381(22), 2157-2157. https://doi.org/doi:10.1056/NEJMicm1904420

²CDC Public Health Image Library - https://phil.cdc.gov/Default.aspx

CONGENITAL SYPHILIS PREVENTION

THE BASICS: SYPHILIS AND CONGENITAL SYPHILIS 101

Congenital syphilis can be prevented by:



Diagnosing and treating syphilis prior to pregnancy



Diagnosing and treating syphilis ≥ 30 days before delivery

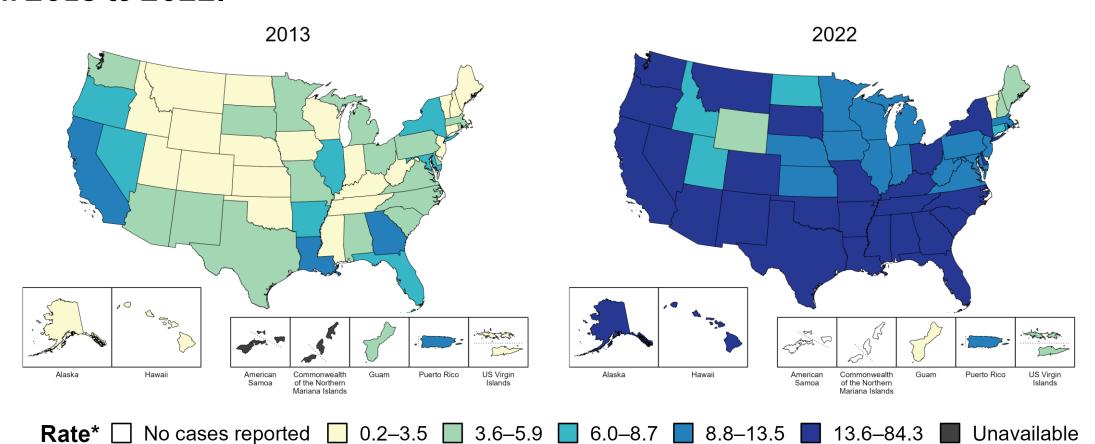




PRIMARY & SECONDARY SYPHILIS TRENDS, 2013 - 2022

SYPHILIS TRENDS

Primary and secondary syphilis rate (the most infectious stage) increased by 222% from 2013 to 2022.

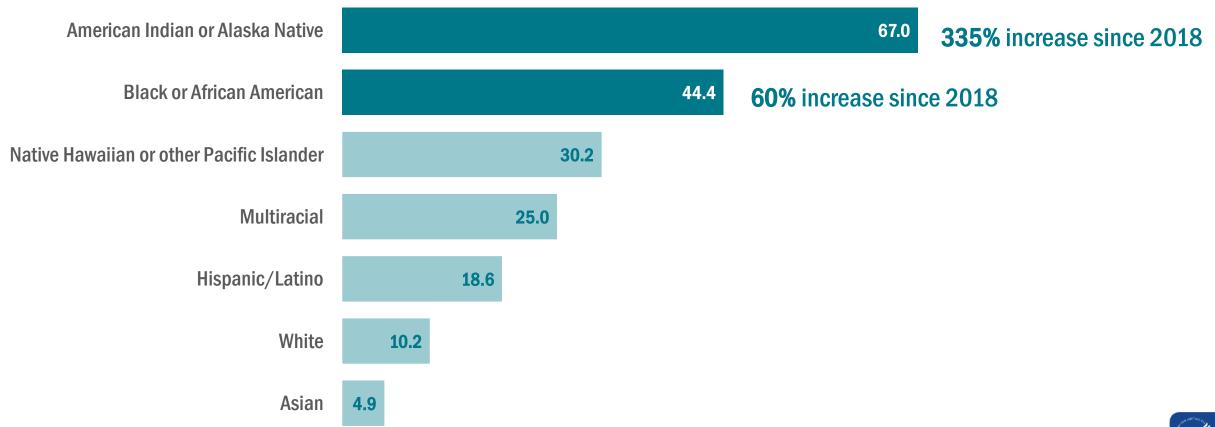




PRIMARY & SECONDARY SYPHILIS TRENDS, BY RACE/RTHNICITY, 2022

SYPHILIS TRENDS

Non-Hispanic American Indian/Alaska Native and Black/African American people had the highest rates* of primary and secondary syphilis in 2022.

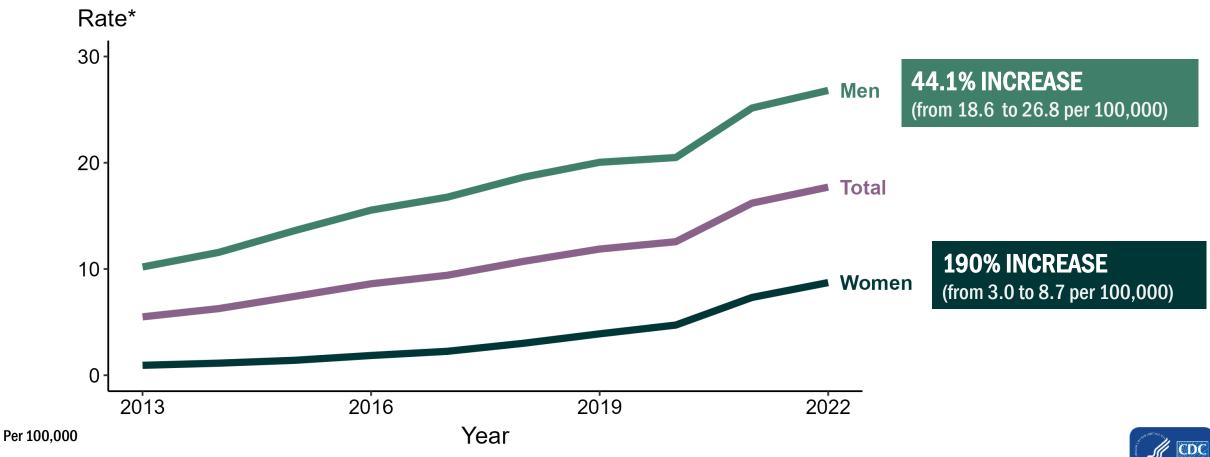




PRIMARY & SECONDARY SYPHILIS BY SEX, 2013 - 2022

SYPHILIS TRENDS

From 2021-2022, the rate of reported primary and secondary syphilis tripled among women.

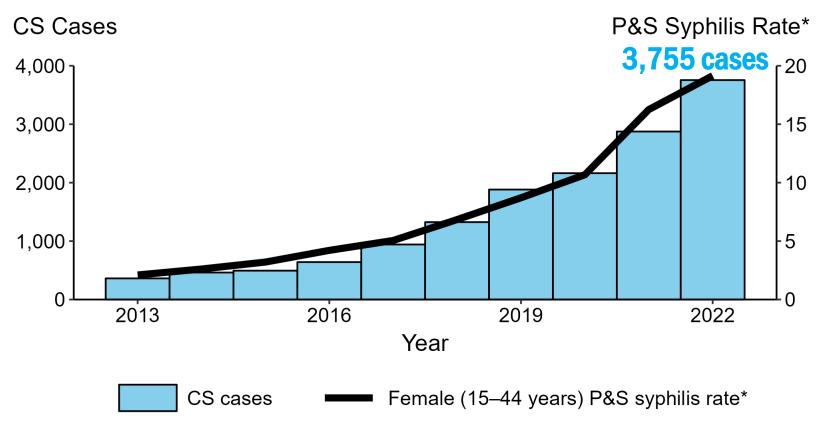


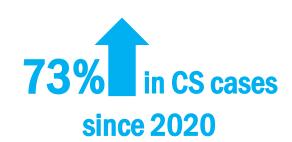
NOTE: Includes all stages of syphilis and congenital syphilis

CONGENITAL SYPHILIS CASES AND SYPHILIS RATES AMONG WOMEN

SYPHILIS TRENDS

In 2022, 3,755 cases of congenital syphilis were reported and these numbers have increased alongside primary and secondary syphilis among women.



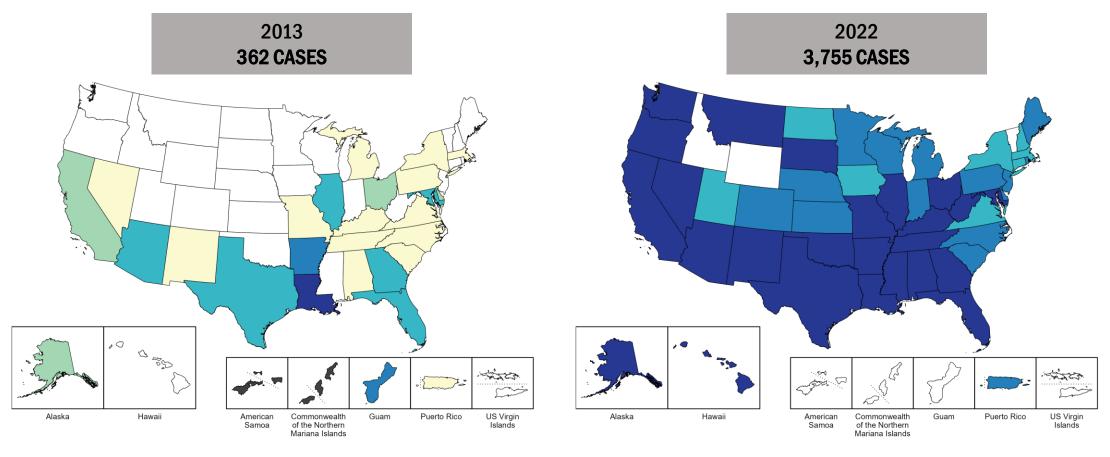




CONGENITAL SYPHILIS RATES BY JURISDICTION

CONGENITAL SYPHILIS TRENDS

Congenital syphilis cases increased by 937% from 2013 to 2022.



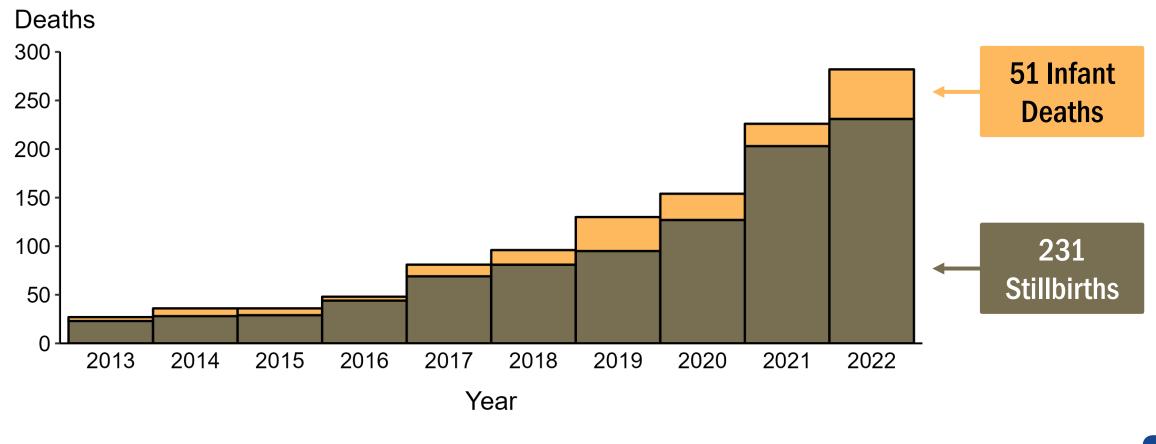


CONGENITAL SYPHILIS TRENDS

CONGENITAL SYPHILIS TRENDS

Congenital syphilis-related stillbirths and infant deaths have increased.

Infant death



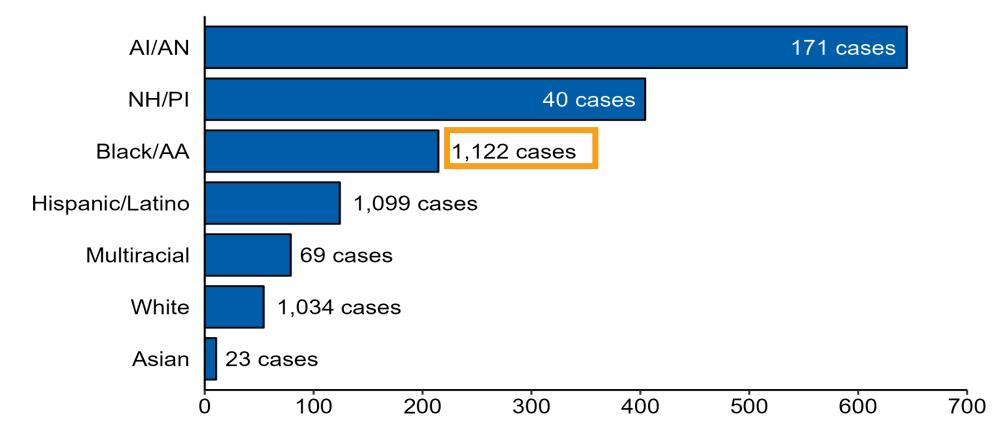
Stillbirth



CONGENITAL SYPHILIS BY RACE/ETHNICITY

CONGENITAL SYPHILIS TENDS

In 2022, the <u>number</u> of congenital syphilis cases was highest among people who were non-Hispanic Black or African American.



^{*}Per 100,000 live births

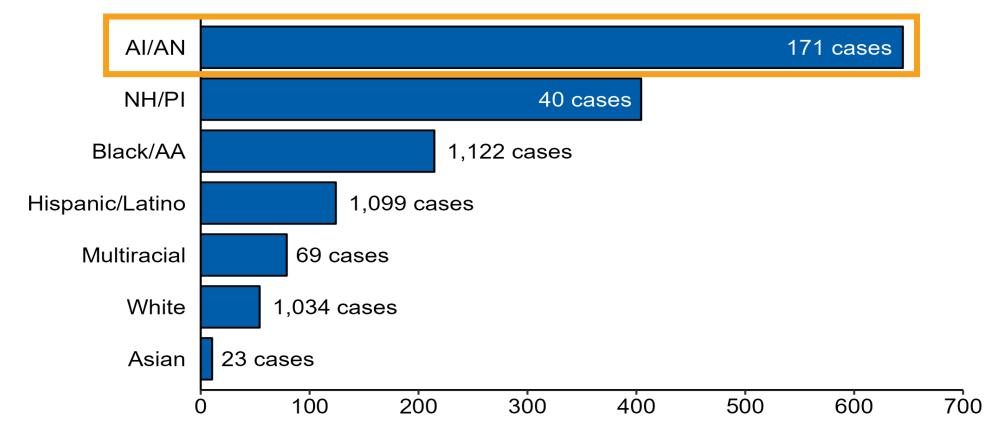




CONGENITAL SYPHILIS BY RACE/ETHNICITY

CONGENITAL SYPHILIS TENDS

In 2022, <u>rates</u> of congenital syphilis were highest among people who were non-Hispanic American Indian or Alaska Native.



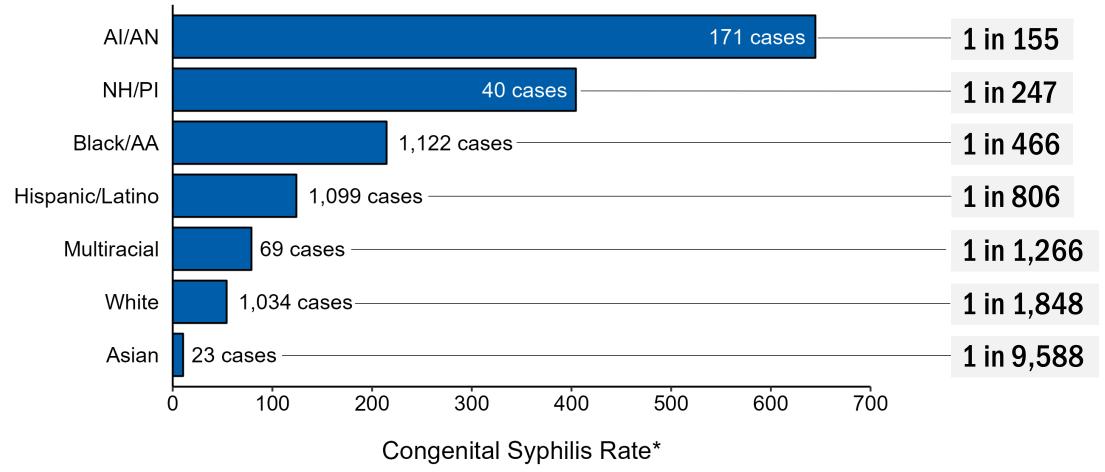




CONGENITAL SYPHILIS BY RACE/ETHNICITY

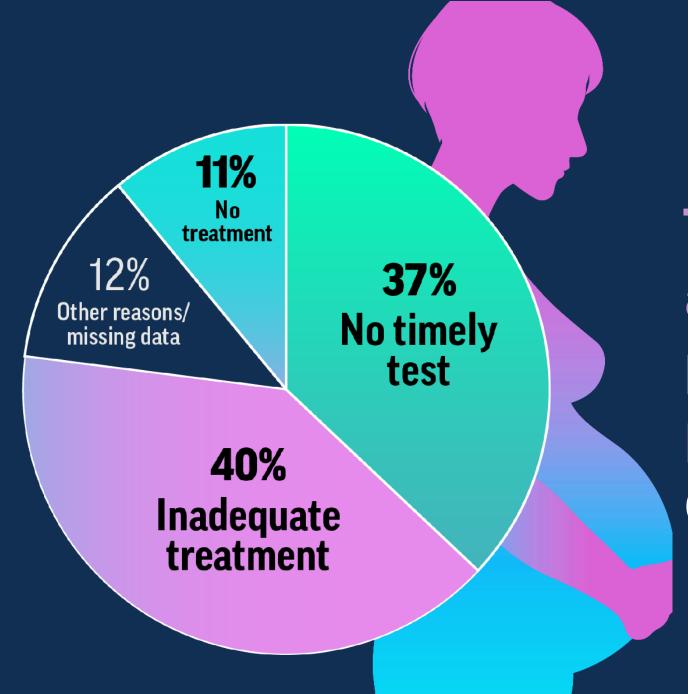
CONGENITAL SYPHILIS TENDS





^{*}Per 100,000 live births



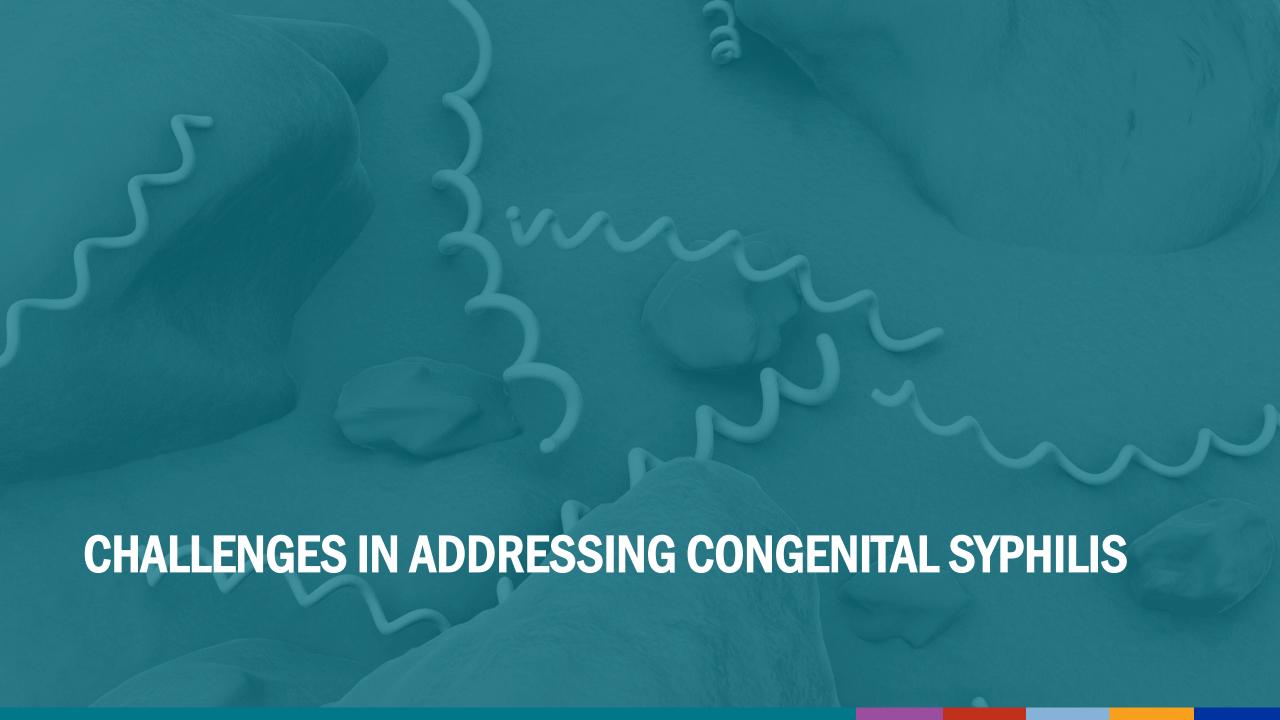


Timely syphilis testing and treatment during pregnancy could have prevented almost 90% of cases.

What challenges do your communities face in accessing prenatal care and syphilis testing and treatment?

Nobody has responded yet.

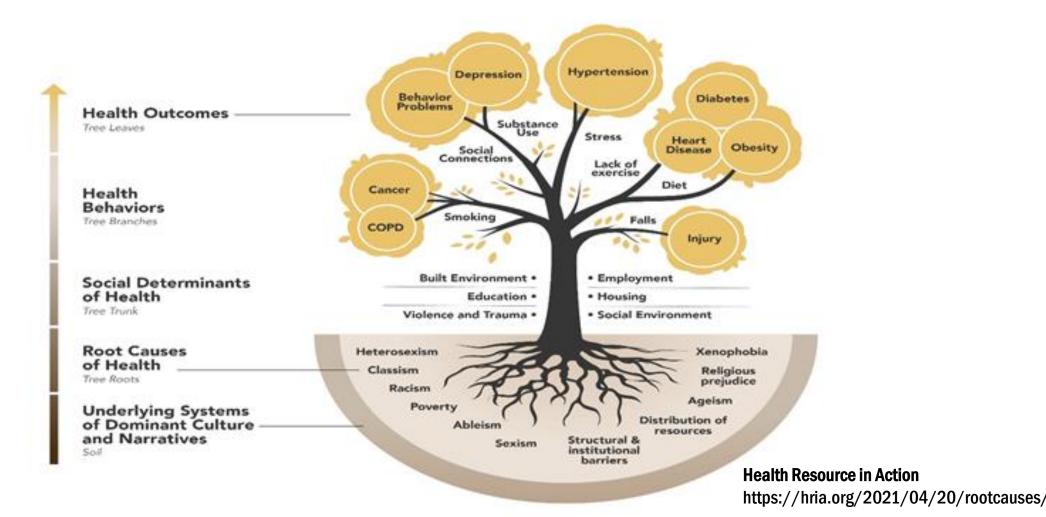
Hang tight! Responses are coming in.



SOCIAL DETERMINANTS OF HEALTH

CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

Many upstream factors contribute to observed health inequities.

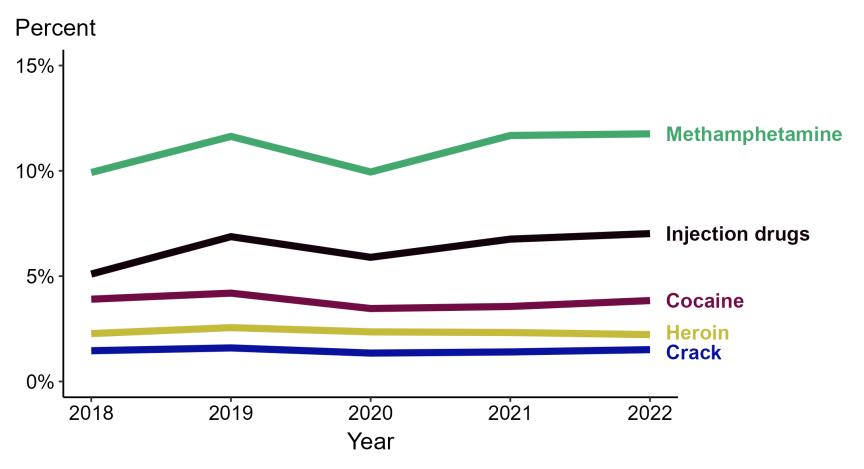




PRIMARY AND SECONDARY SYPHILIS AND SUBSTANCE USE BEHAVIORS, 2018-2022

CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

Substance use impacts congenital syphilis outcomes and access to prenatal care.



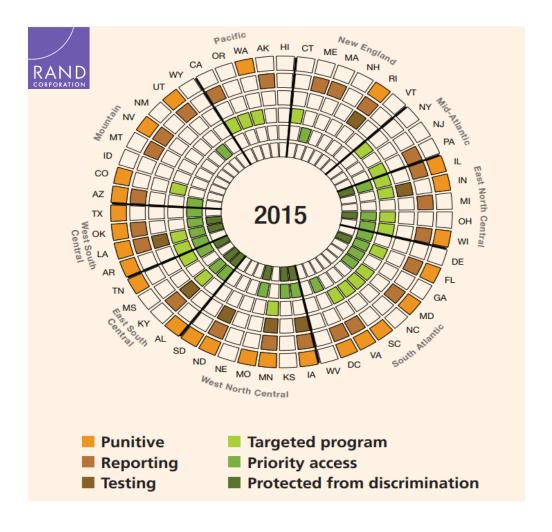
Proportion reporting injection drug use, methamphetamine use, heroin use, crack use, or cocaine use within the last 12 months calculated among cases with known data (cases with missing or unknown responses were excluded from the denominator).



PUNITIVE POLICIES FOR SUBSTANCE USE IN PREGNANCY

CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

Punitive policies for substance use in pregnancy affect access to adequate prenatal care.



JAMA Pediatrics | Original Investigation

September 19, 2022

Association of State Child Abuse Policies and Mandated Reporting Policies With Prenatal and Postpartum Care Among Women Who Engaged in Substance Use During Pregnancy

Anna E. Austin, PhD^{1,2}; Rebecca B. Naumann, PhD^{2,3}; Elizabeth Simmons, MPH^{1,4}

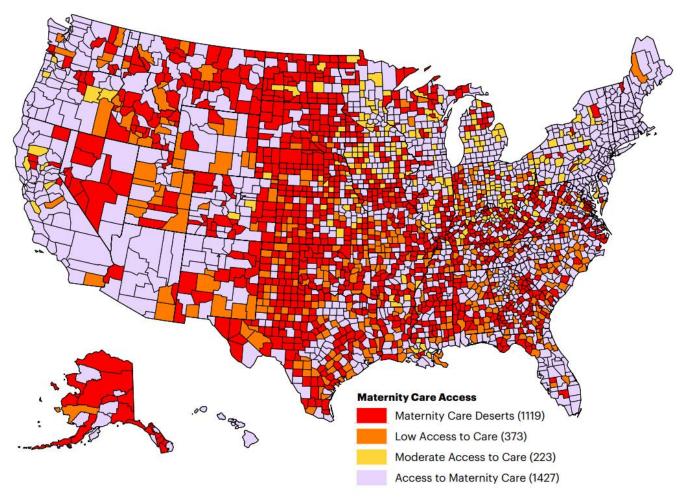




PREGNANCY CARE DESERTS

ADDRESSING CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

Pregnancy care deserts is a growing problem.

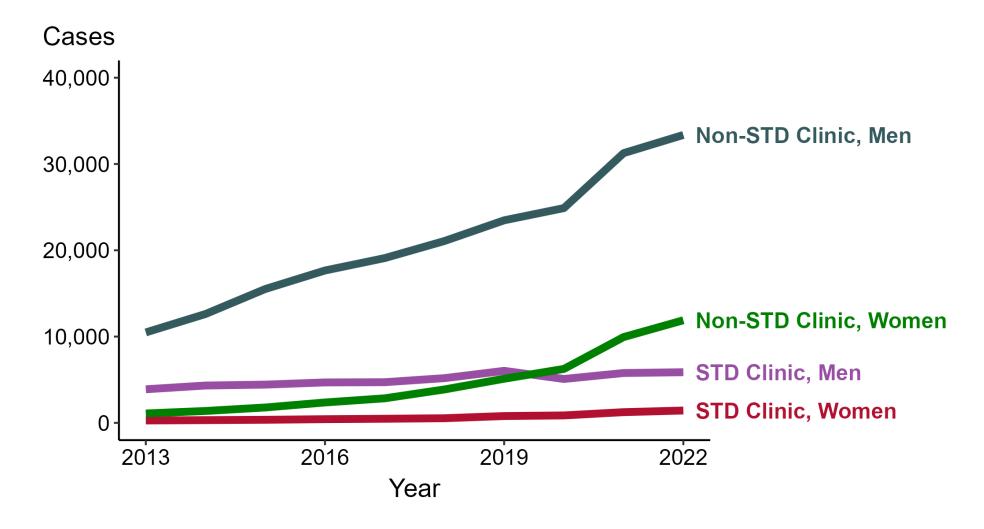


More than 2.2 million women of childbearing age live in pregnancy care deserts.



PRIMARY AND SECONDARY SYPHILIS BY REPORTING SOURCE AND SEX, UNITED STATES, 2013–2022 CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

An increasing number of syphilis cases are being reported from non-STD clinics.





BICILLIN SHORTAGE

CHALLENGES IN ADDRESSING CONGENITAL SYPHILIS

Bicillin L-A® Shortage impacts care for persons with syphilis.

Pfizer alerts doctor shortage of antibior prioritize drug for p

The New York Times

Antibiotic Shortage Could Worsen Syphilis Epidemic

Syphilis arce into next year, Pfizer warns.

FDA to Import Penicillin From France to Address Syphilis Drug Shortage

January 16, 2024

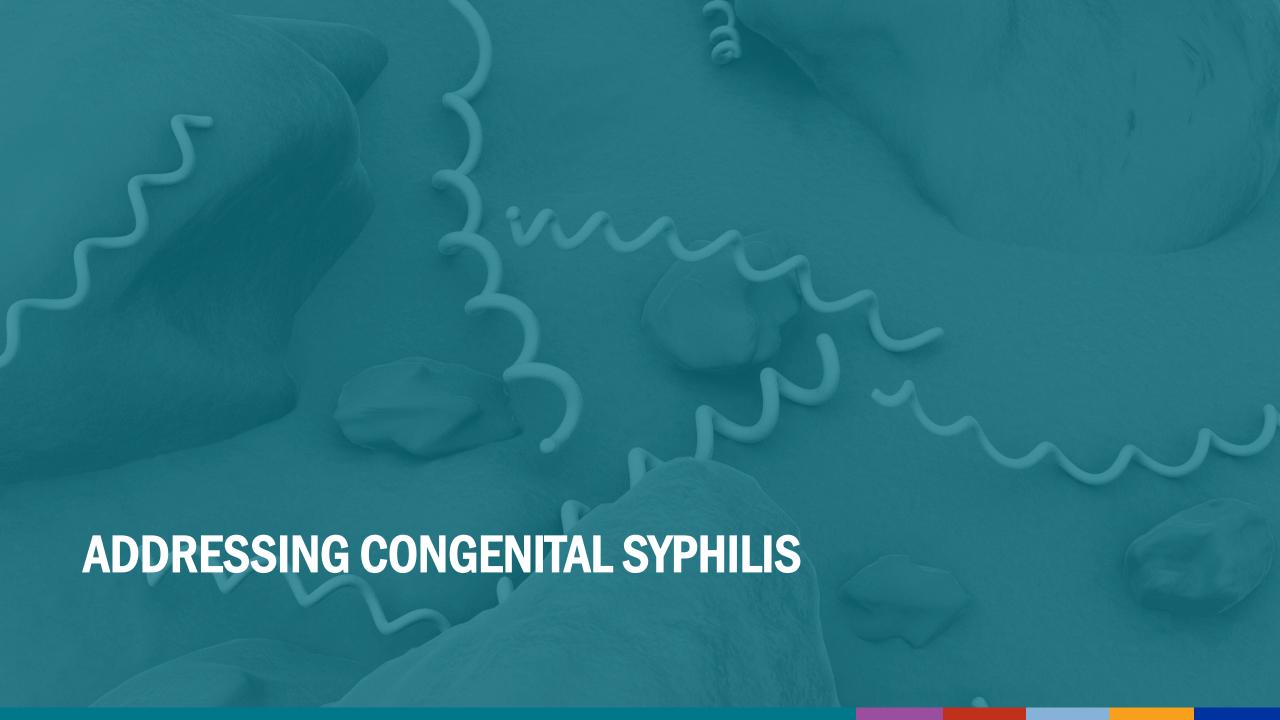
To address the ongoing U.S. shortages of Bicillin L-A, a temporarily approved French manufacturer Laboratoire Extencilline, (benzathine benzylpenicillin) a drug not ap US syphilis cases are rising, and STD clinics warn they're struggling to find crucial antibiotic



SYPHILIS IS HARD!

Testing, staging, and treating syphilis are difficult! However, congenital syphilis is preventable through collaborative strategic partnerships and continuous education.





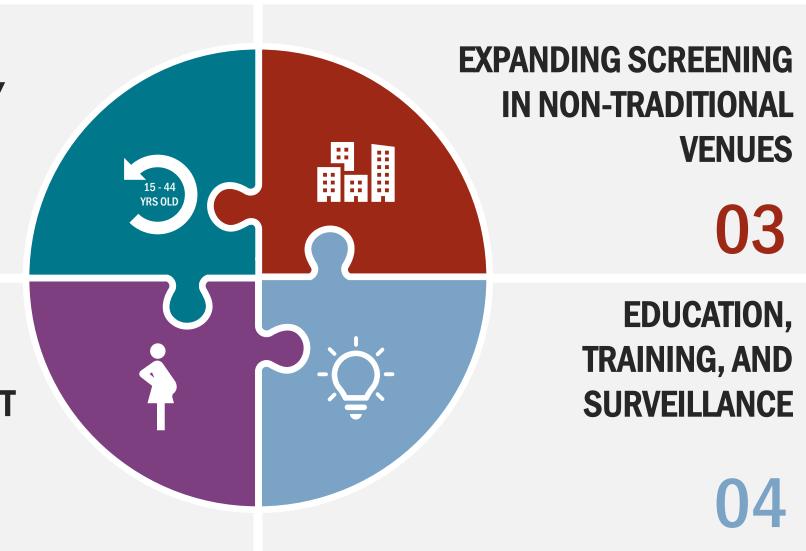
ADDRESSING CONGENITAL SYPHILIS

SCREENING AND TREATING SEXUALLY ACTIVE PEOPLE

01

SCREENING AND TREATING PEOPLE WHO ARE PREGNANT

02

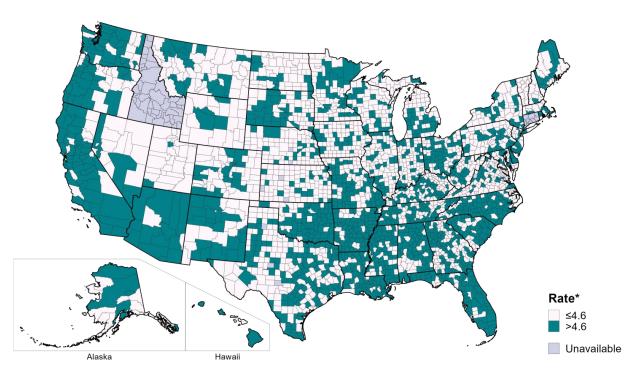


ADDRESSING CONGENITAL SYPHILIS

SCREENING AND TREATING OF SEXUALLY ACTIVE PEOPLE

If the person is sexually active, they should get tested for syphilis.

- 1. Screen all sexually active people ages 15-44 for syphilis in counties where primary and secondary syphilis rate is above 4.6/100,000 among females aged 15-44 years.
 - *This includes 76% of the U.S. population. *
- 2. Screen people with increased risk of syphilis exposure.
- 3. Take comprehensive social and sexual health histories. For information on how to do this: check out NCSD's Webinar.



ADDRESSING CONGENITAL SYPHILIS

SCREENING AND TREATING PEOPLE WHO ARE PREGNANT

All pregnant people should be tested for syphilis early in pregnancy.

- 1. First prenatal visit Consider screening and treatment at the time of pregnancy confirmation if follow-up is difficult.
- 2. 28 weeks and at delivery Per ACOG's new guidance
- 3. All people delivering a stillborn infant.
- 4. **Prioritize treating people who are pregnant** with benzathine penicillin G as needed.
- 5. **Test and treat the partners** of people who are pregnant.



ADDRESSING CONGENITAL SYPHILIS

UPDATED ACOG RECOMMENDATIONS

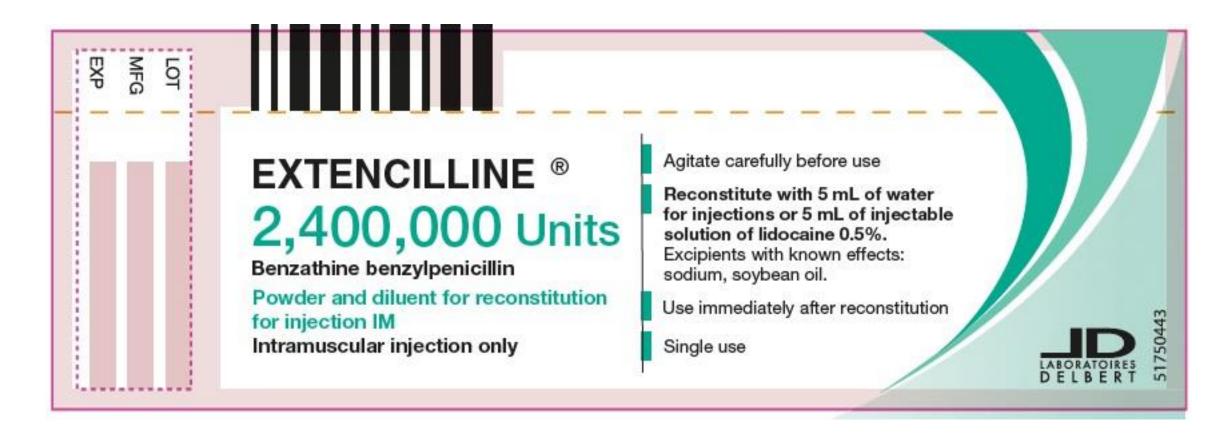
All pregnant people should be tested for syphilis three times!

Clinical Guidance Topics Q Search ACOG Clinical Society for Maternal-Fetal Medicine endorse this document Obstetrician-gynecologists and other obstetric care arch page Q professionals should screen all pregnant individuals **Updated ACOG Recommendation** Jump to: serologically for syphilis at the first prenatal care visit, The American College of Obstetricians and Gynecologists (ACOG) continues to endorse the Centers for Disease Control and followed by universal rescreening during the third ted ACOG Prevention (CDC) Sexually Transmitted Infection Treatment mmendation Guidelines, 2021 1. However, in the context of the rapidly trimester and at birth, rather than use a increasing rates of congenital syphilis, obstetrician-gynecologists ment of Syphilis and other obstetric care professionals should screen all pregnant risk-based approach to testing. individuals serologically for syphilis at the first prenatal care visit, followed by universal rescreening during the third trimester and at birth, rather than use a risk-based approach to testing. Rationale

Journals & Publications

Patient Education

Temporary Importation: Extencilline

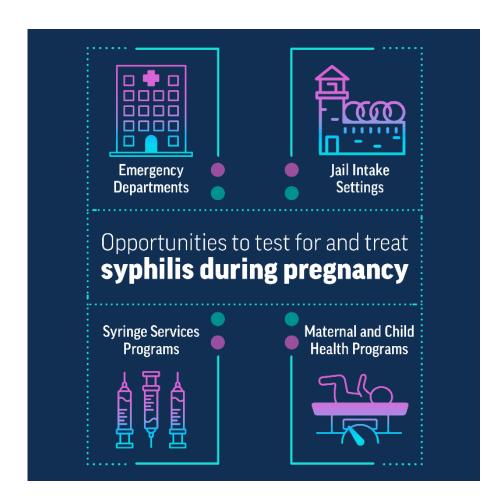


ADDRESSING CONGENITAL SYPHILIS

EXPANDING SCREENING IN NON-TRADITIONAL VENUES

Any healthcare encounter during pregnancy is an opportunity to prevent congenital syphilis!

- 1. Implement **routine screening** wherever people seek and receive care services.
 - Jail Intake
 - Emergency Departments/Urgent Care Centers
 - Syringe Services Programs
 - Homeless Shelters
 - MCH Programs/Birthing Centers/Midwifery Services/Doula Care Services
- 2. Implement rapid syphilis tests when lost to follow-up is a concern.



ADDRESSING CONGENITAL SYPHILIS

EDUCATION, TRAINING, AND SURVEILLANCE

Talk about Syphilis! Talk about healthy sex and healthy pregnancies!

- 1. Active syphilis and congenital syphilis surveillance in all 59 jurisdictions to identify trends and missed opportunities
- 2. **Educate and train clinicians** to screen, diagnose, and treat persons with syphilis.
- 3. Educate people who are pregnant about the risk to their pregnancy and baby if syphilis is left untreated.
- 4. **Educate the general public** about the rise in syphilis and the importance of getting tested and treated.



What innovative approaches or interventions can be implemented to decrease congenital syphilis in your communities?

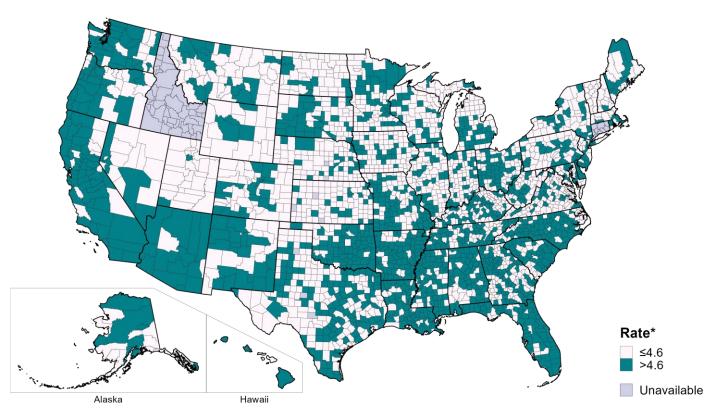
Nobody has responded yet.

Hang tight! Responses are coming in.



ADDRESSING CONGENITAL SYPHILIS

WHAT'S YOUR COUNTY RATE?





Scan the QR Code Below to find out your county rate

- Per 100,000
- NOTE: The Healthy People 2030 target for the rate of primary and secondary syphilis in women aged 15–44 years is 4.6 per 100,000.

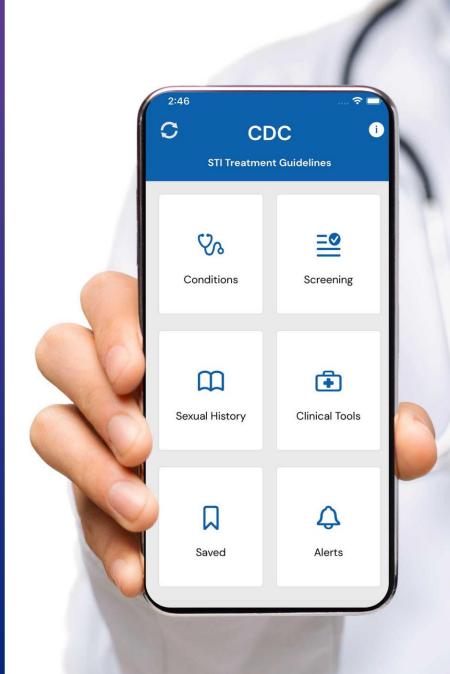


The Updated 2021 STI Treatment Guidelines App Is Now Available

Get treatment regimens FAST

Download CDC's free app for iPhone and Android devices

www.cdc.gov/std





REGIONAL STD TRAINING CENTERS

OUR 8 REGIONAL CENTERS ASSIST CLINICIANS IN THEIR TRAINING AREAS ACROSS THE UNITED STATES

















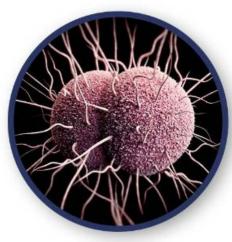
LEARN MORE ABOUT THE CENTERS ▶



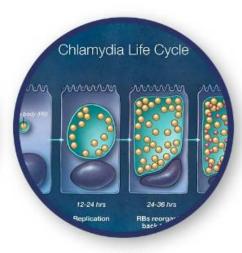


National STD Curriculum

TREATMENT GUIDELINES INTEGRATED EDUCATIONAL WEBSITE. FREE CE.



SELF STUDY



QUICK REFERENCE



QUESTION BANK

EXPLORE THE CURRICULUM ▶

www.std.uw.edu

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CLINICIANS, Got a Tough STD Question?

GET FREE EXPERT STD CLINICAL CONSULTATION AT YOUR FINGERTIPS



National STD experts review



Response within 1-5 business days, depending on urgency

GO)

*THIS SERVICE IS FOR CLINICAL PROVIDERS, INQUIRIES FROM THE GENERAL PUBLIC WILL NOT BE ANSWERED

RESOURCE HANDOUT



SYPHILIS AND CONGENITAL SYPHILIS RESOURCES

Syphilis rates are increasing nationwide, leading to an alarming rise in congenital syphilis cases. Below, you'll find links to essential resources to learn more about syphilis and congenital syphilis, raise awareness, and take action to help decrease rates.

GET UP TO SPEED ON SYPHILIS & CONGENITAL SYPHILIS

- National Syphilis and Congenital Syphilis Syndemic (NSCSS) Federal Task Force Press Release
- . CDC's STI Data and Statistics
- Vital Signs: Missed Opportunities for Preventing Congenital Syphilis
- American College of Obstetricians and Gynecologists (ACOG) Labor of Love Podcast | Season 3, Episode 2: Syphilis Surge: A Rising Concern in Pregnancy
- . CDC Call to Action: Let's Work Together to Stem the Tide of Rising Syphilis in the U.S.
- Council of State and Territorial Epidemiologists Syphilis and Congenital Syphilis Surveillance Training
- University of Washington's National STD Curriculum

SCREENING & TREATMENT RESOURCES



- · CDC Syphilis Screening Recommendations
- ACOG's Updated Recommendation on Syphilis Testing During Pregnancy
- County-level Syphilis Rates to Help Direct Screening Efforts
- CDC Syphilis and Congenital Syphilis Treatment Guidelines
- · State Statutory and Regulatory Language Regarding Prenatal Syphilis Screenings in the United States
- · National Commission on Correctional Health Care Screening for Syphilis in Jails

COMMUNICATION RESOURCES

- · CDC Congenital Syphilis Fact Sheet
- · CDC Syphilis Fact Sheet
- CDC Syphilis Prenatal Screening (Protect Your Baby) Brochure
- CDC Syphilis Brochure
- CDC State STI Profiles
- CDC STI Social Media Resources
- OASH Office on Women's Health Protect Against Syphilis and Congenital Syphilis Two-Pager
- . Greater Than HIV STI Digital Library on STI Prevention, Screening & Treatment
- . Greater Than HIV Ask Me Anything about STIs Video Series
- . Indian Country ECHO Syphilis Resource Hub Indian Country ECHO
- March Of Dimes Congenital Syphilis Infographic
- National Coalition of STD Directors Collection of Congenital Syphilis Campaigns

APPROACHES TO ADDRESSING CONGENITAL SYPHILIS



- Title V MCH Dear Colleagues Letter
- Substance Abuse and Mental Health Services Administration (SAMHSA) Syphilis Dear Colleague Letter
- Association of State and Territorial Health Officials (ASTHO) Effective Public Health Approaches to Reducing Congenital Syphilis
- American Medical Association Toolkit to Increase Screenings for STIs and HIV in Community Health Centers and Emergency Departments
- · Health Alert Template for Congenital Syphilis

Thank you!

CONTACT INFORMATION:

Fanta Drame | nvk4@cdc.gov

Kate Miele | pph9@cdc.gov

Phoebe Thorpe | pht1@cdc.gov

For more information, contact CDC 1-800-CDC-INFO (232-4636)

TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.



QUESTIONS & ANSWERS/ DISCUSSION