# Congenital Syphilis in Maine: Prevention = Cure

**December 2023**

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A Project of the Division of STD Prevention Massachusetts Department of Public Health Funded by the CDC

Maine Department of Health and Human Services

Maine CDC

Maine Center for Disease Control and Prevention

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We do not intend to discuss an unapproved/investigative use of a commercial product/device in our presentation.

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- Continuing education credits are available for this learning activity.
- After the program, participants will receive an email with link to complete a short evaluation.
- Upon completion of evaluation, CE certificate will be emailed to you.
- Today's webinar is being recorded, and after the program, you will also receive an email with a link to the recording.

**Please feel free to enter questions in Zoom Chat**
**We will answer as many as possible at the end**

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# Objectives

- Review [congenital] syphilis testing recommendations and epidemiology in Maine
- Review syphilis presentations and natural history
- Apply syphilis diagnostic testing algorithms and interpret testing results
- Review stage-specific syphilis treatment and management
- Provide clinical and public health resources

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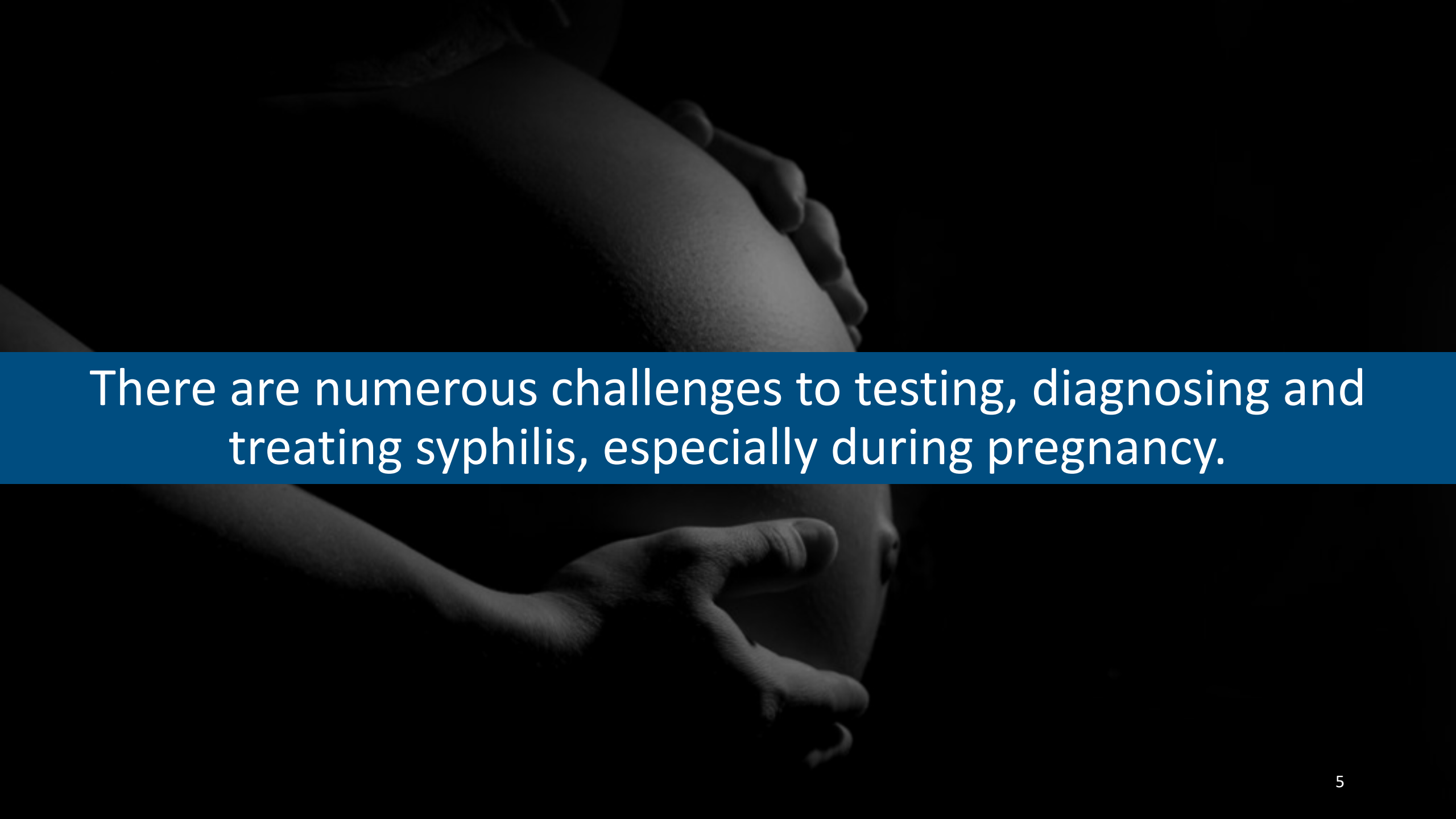
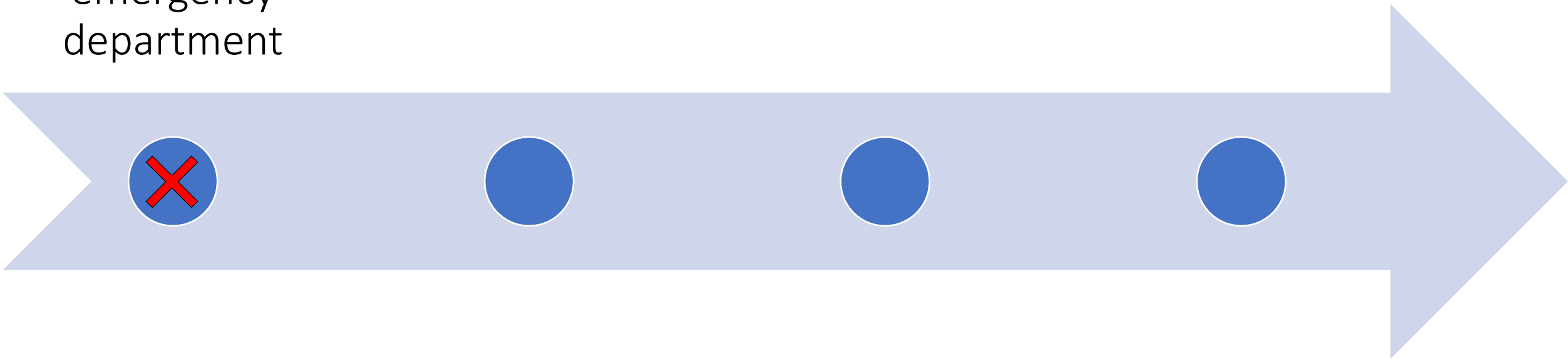


There are numerous challenges to testing, diagnosing and treating syphilis, especially during pregnancy.

No syphilis testing ordered at the emergency department



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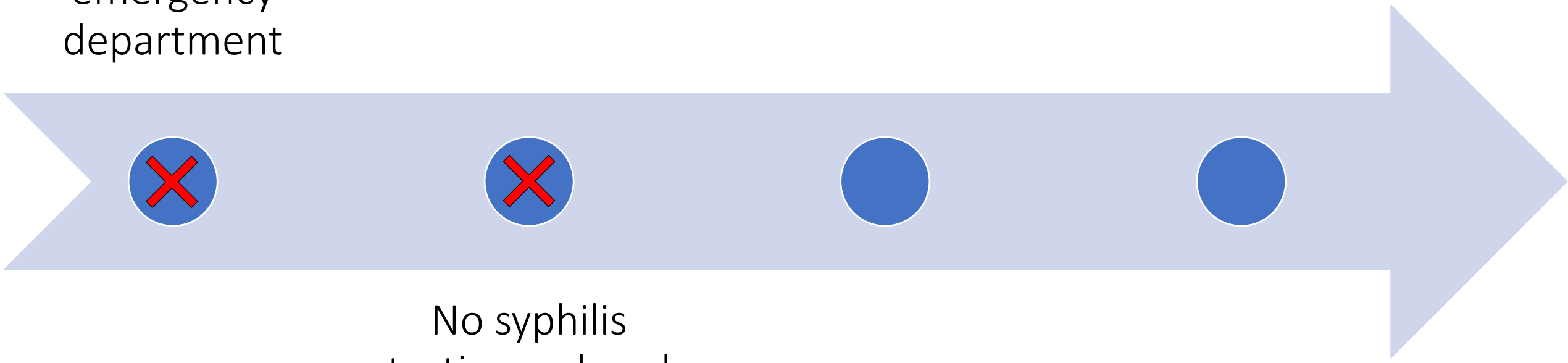
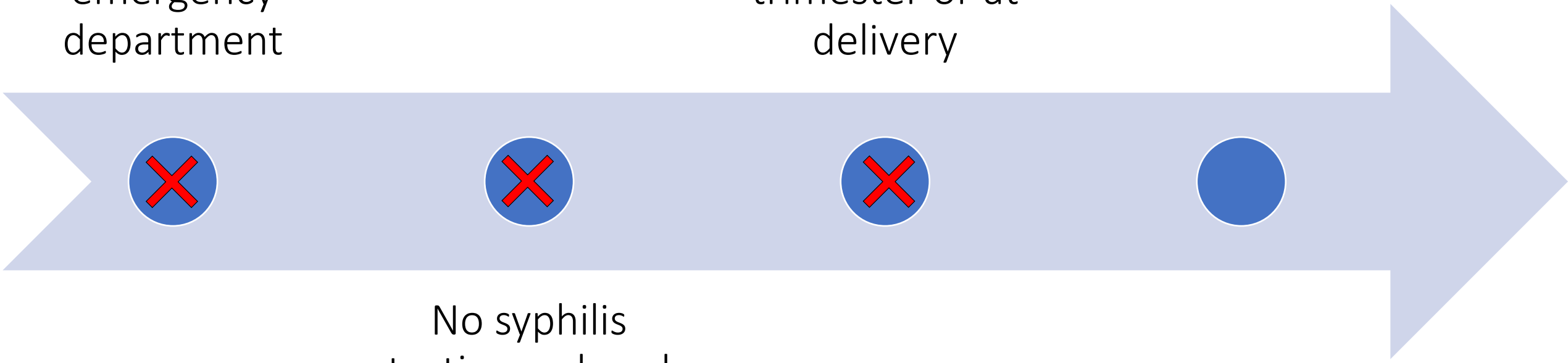


No syphilis testing ordered at first OB visit

No syphilis testing ordered at the emergency department

No syphilis testing ordered at first OB visit

No syphilis testing ordered during 3rd trimester or at delivery



No syphilis testing ordered at the emergency department

No syphilis testing ordered at first OB visit

No syphilis testing ordered during 3rd trimester or at delivery

Syphilis testing ordered at plasma center

# Missed prevention opportunities among persons delivering babies with congenital syphilis include:

**No timely prenatal care**

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**No timely prenatal care**

**No syphilis testing**

# Missed prevention opportunities among persons delivering babies with congenital syphilis include:

**No timely prenatal care**

**No syphilis testing**

**Not adequately treated**

# Health care providers in Maine are required by law* and with patient consent, to test for syphilis at least once during pregnancy.


https://legislature.maine.gov/statutes/22/title22sec1231.html#:~:text=Every%20physician%20attending%20a%20woman,factors%20to%20a%20laboratory%20of

# Health care providers in Maine are required by law* and with patient consent, to test for syphilis at least once during pregnancy.

- Maine CDC also recommends testing:
  - All pregnant people whenever they present for care
  - People at high risk for syphilis regardless of known pregnancy status



https://legislature.maine.gov/statutes/22/title22sec1231.html#:~:text=Every%20physician%20attending%20a%20woman,factors%20to%20a%20laboratory%20of

# Health care providers in Maine are required by law* and with patient consent, to test for syphilis at least once during pregnancy.

- Maine CDC also recommends testing:
  - All pregnant people whenever they present for care
  - People at high risk for syphilis regardless of known pregnancy status
- U.S. CDC recommends testing:
  - Asymptomatic women at high risk
  - All pregnant persons AT LEAST once during pregnancy, ideally at the first prenatal visit & again at 28 weeks & at delivery, if at high risk

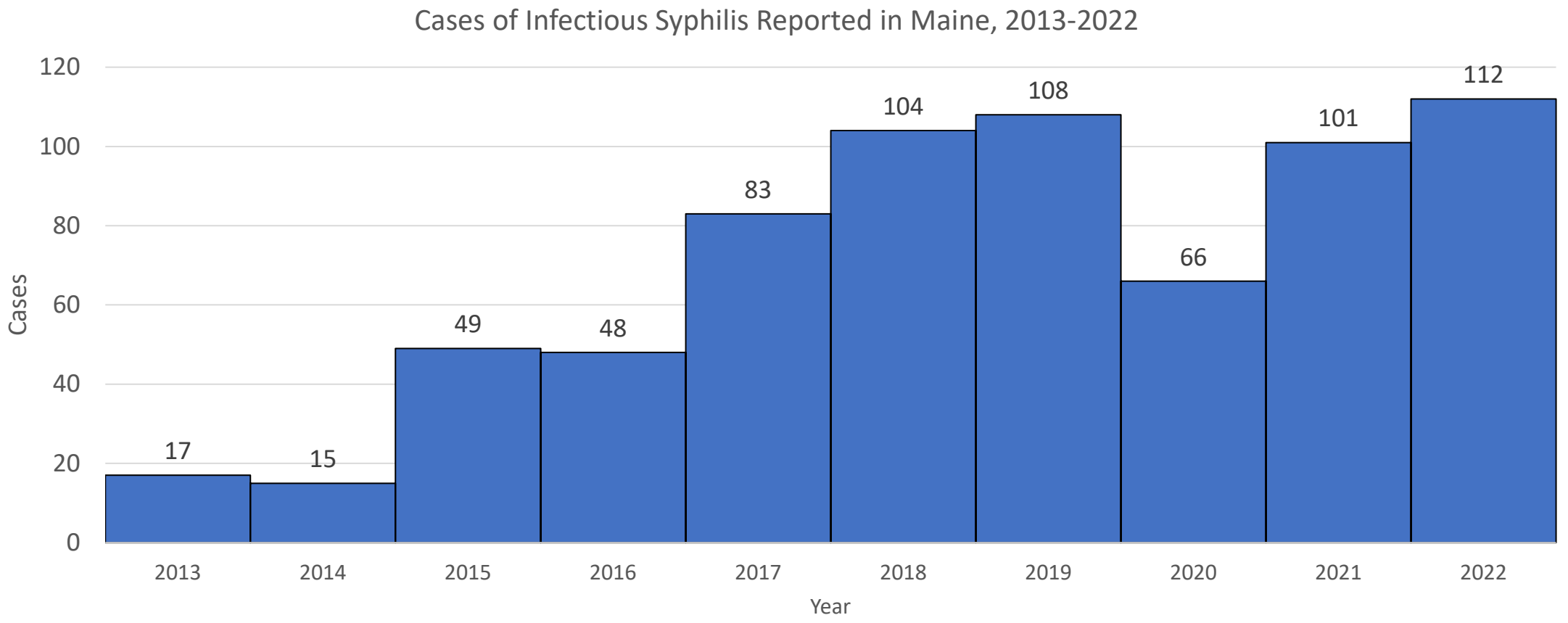

https://legislature.maine.gov/statutes/22/title22sec1231.html#:~:text=Every%20physician%20attending%20a%20woman,factors%20to%20a%20laboratory%20of

# Who is high risk?

- Pregnant persons who:
  - misuse drugs
  - exchange money or goods for sex
  - are unhoused
  - have a history of an STI during pregnancy
  - have multiple sex partners, a new partner, or a partner with an STI
  - live in a community with high syphilis morbidity
  - have had delayed or no prenatal care
  - had a positive syphilis test in the first trimester

# Syphilis & Congenital Syphilis Epidemiology in Maine

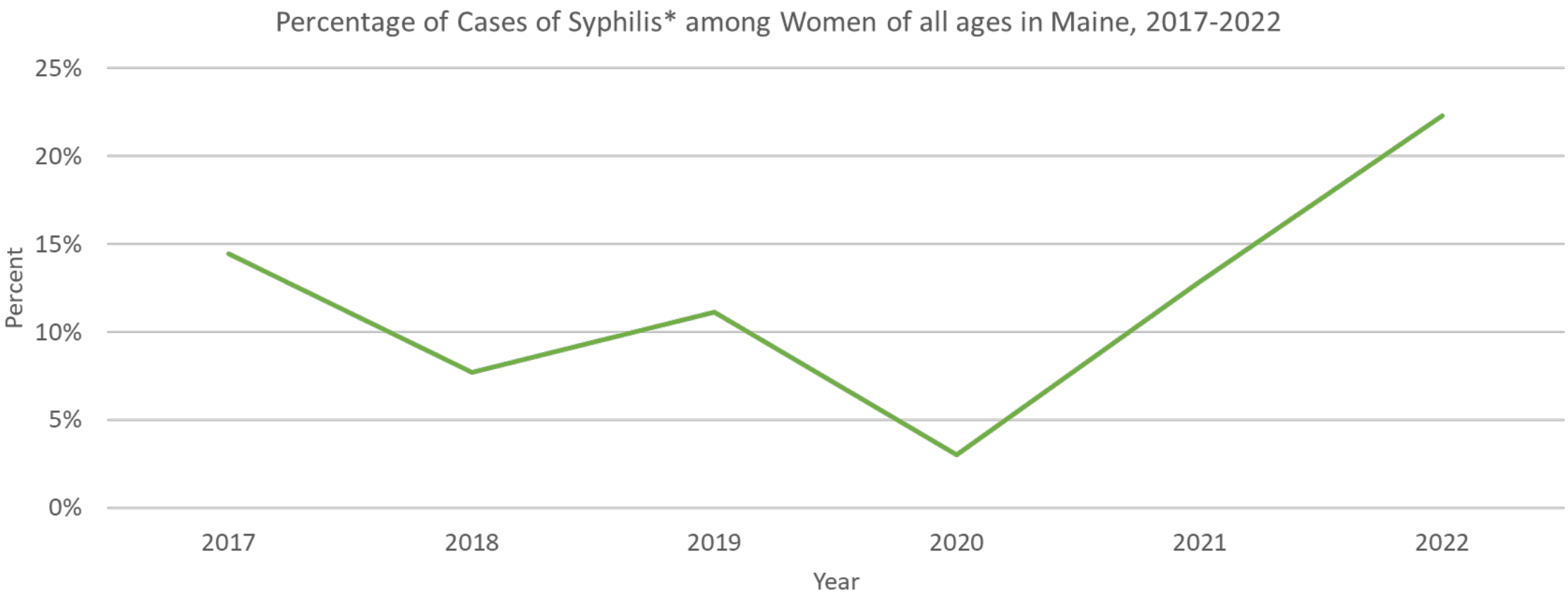
# Cases of syphilis* in Maine have increased >500% during 2013-2022.






*includes primary, secondary and early latent staged infections

# In Maine, the percentage of cases of syphilis* who are women is increasing.

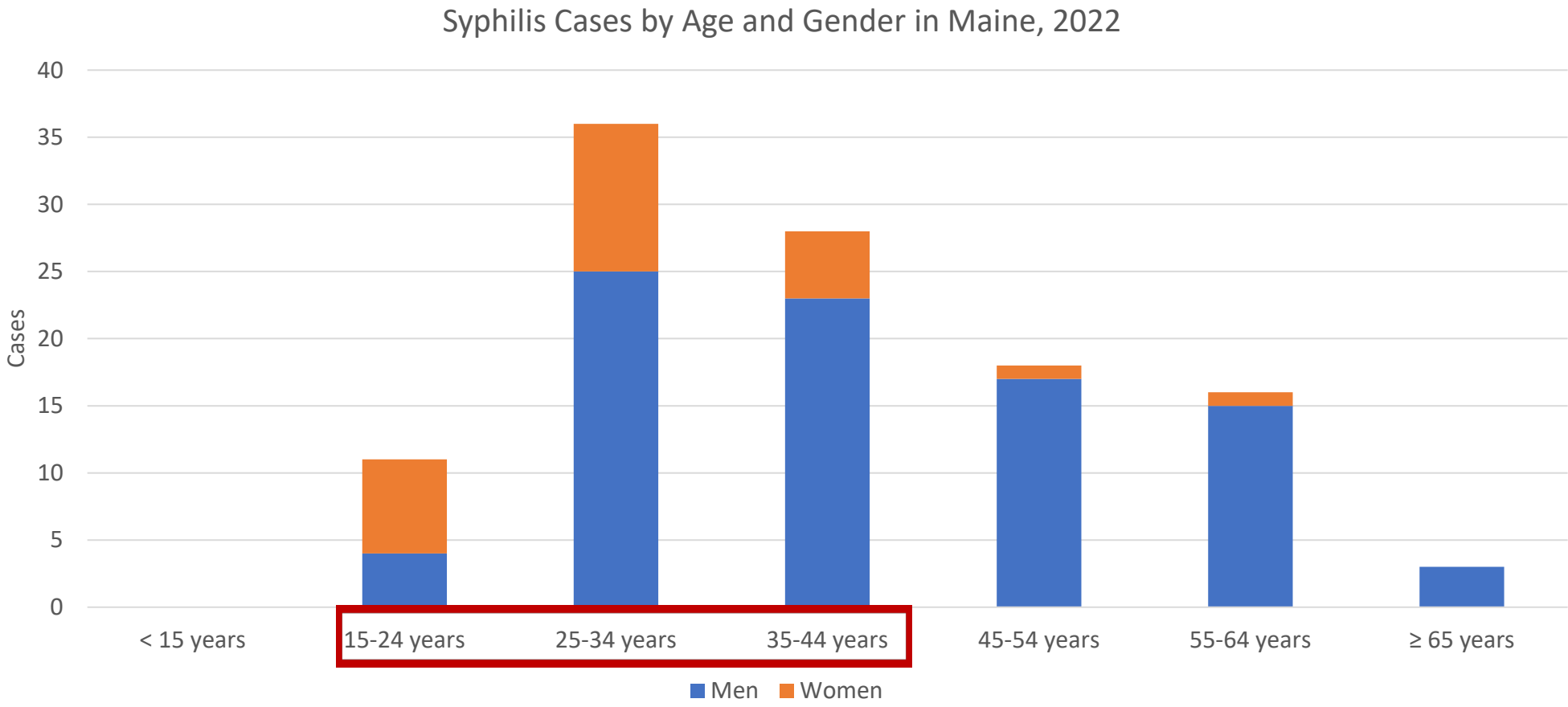



Maine Center for Disease Control and Prevention



*includes primary, secondary and early latent staged infections

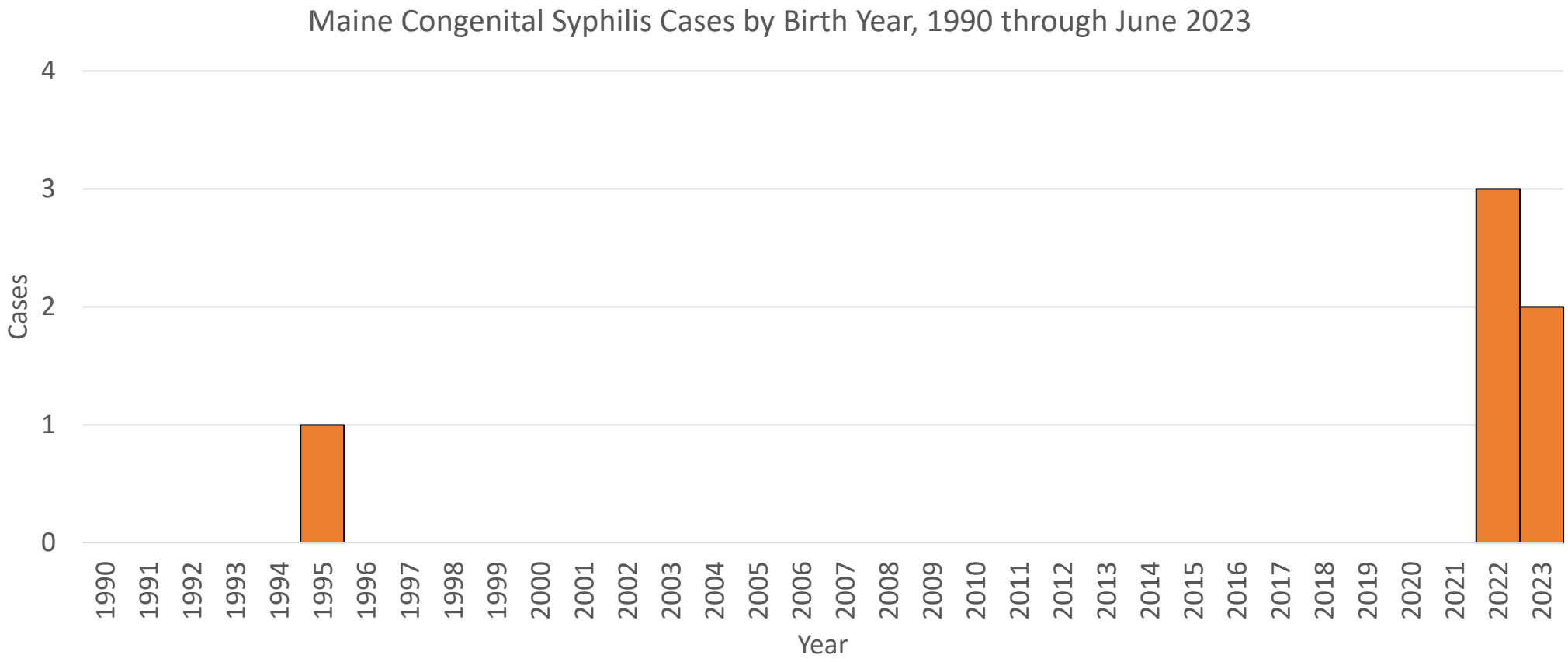
# In 2022, most of the cases of syphilis* among women were in women of reproductive age.






*includes primary, secondary and early latent staged infections

# Since 2022, 5 cases of congenital syphilis have been reported to Maine CDC




2023 data are preliminary as of 10/31/2023

Put more effort into identifying and managing complicated patients

Titers are only one piece of the puzzle

# SYPHILIS: CLINICAL PEARLS

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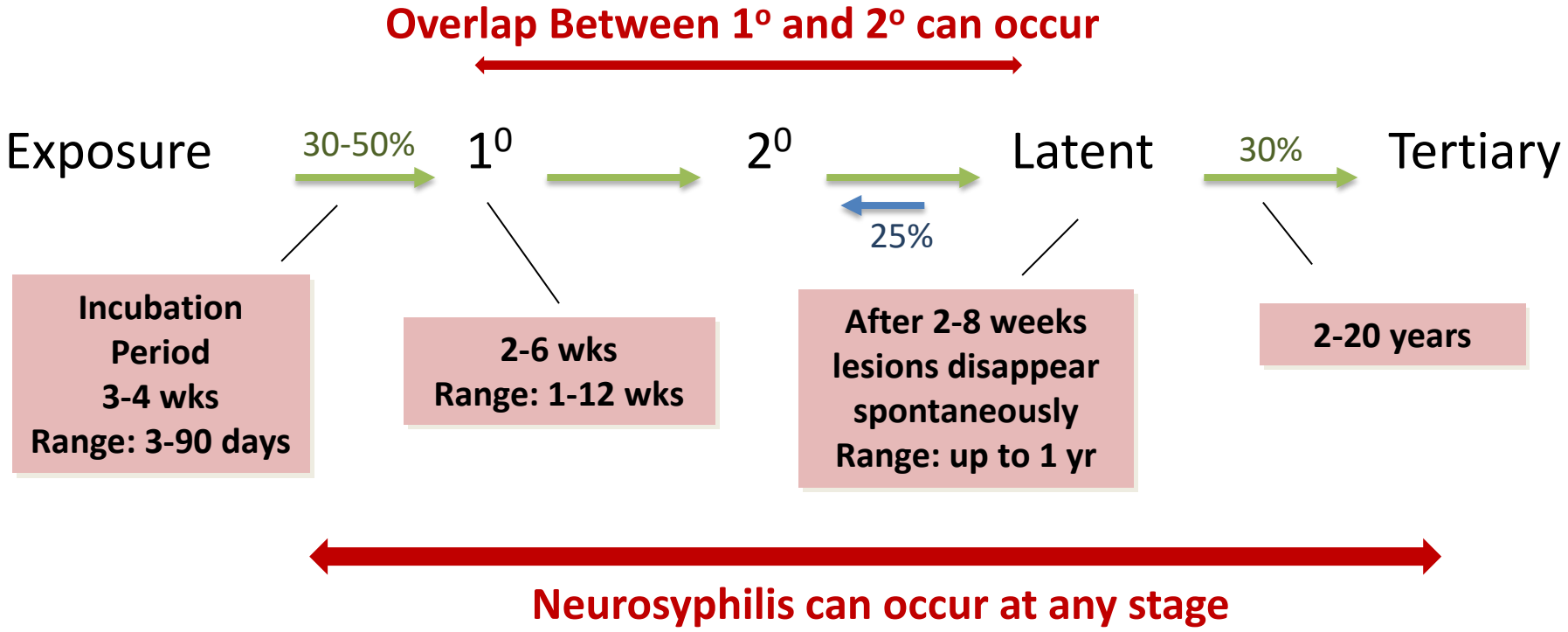
# Syphilis Natural History




**More rapid progression or severe disease (multiple deep ulcers, simultaneous primary &secondary manifestations, lues maligna, neurologic involvement occurring at any stage) mostly described in HIV-infected persons with advanced immunosuppression**

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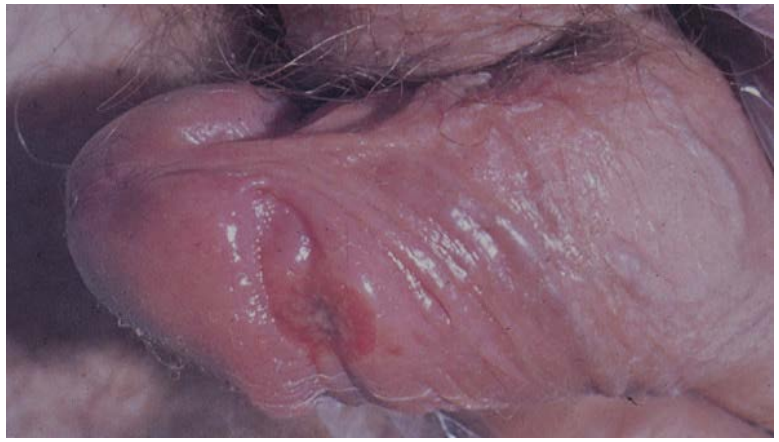
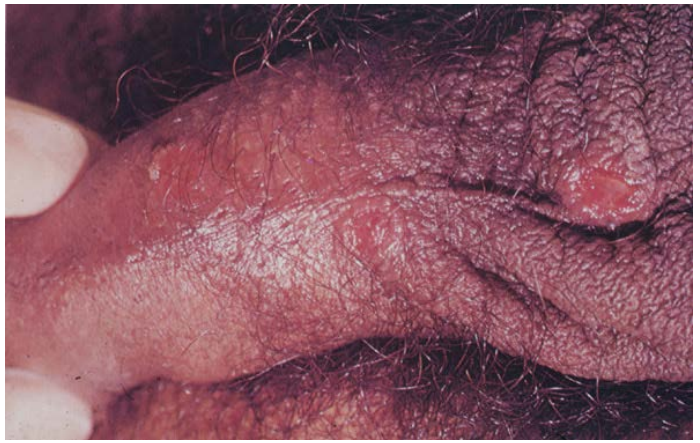
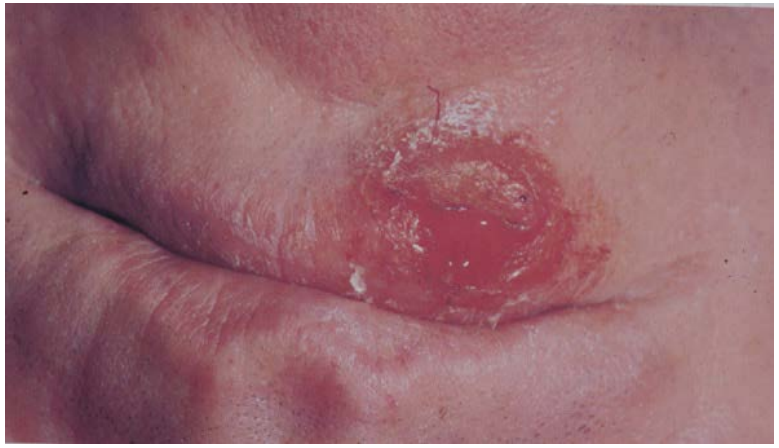
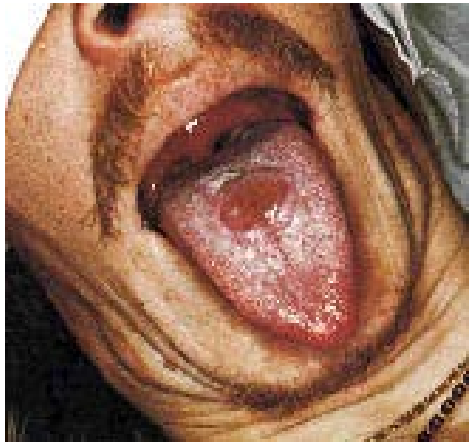
*Courtesy: Susan Philip, SF DPH*
*And M. Urban, URochester*

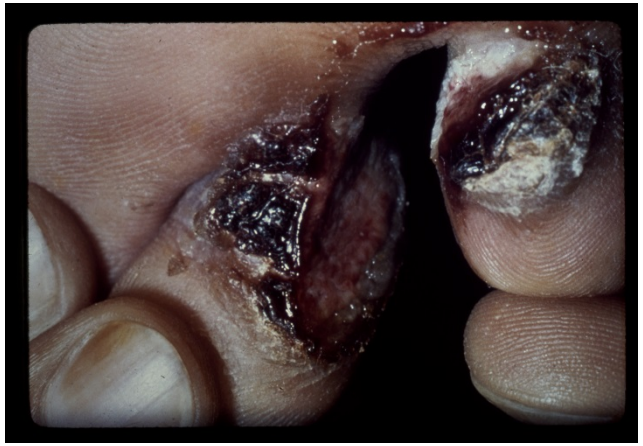
# Primary Syphilis











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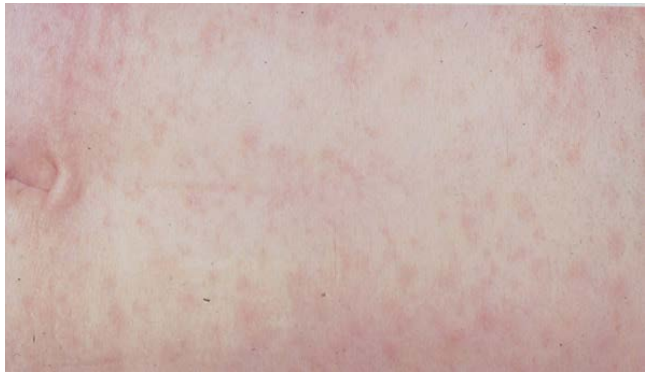
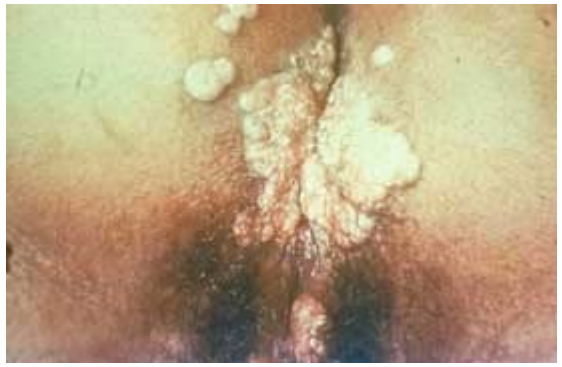
# Secondary Syphilis

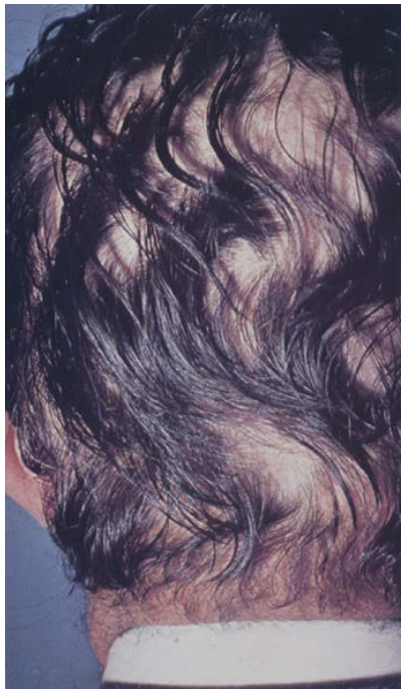
Rash  (acute HIV can look like this!)



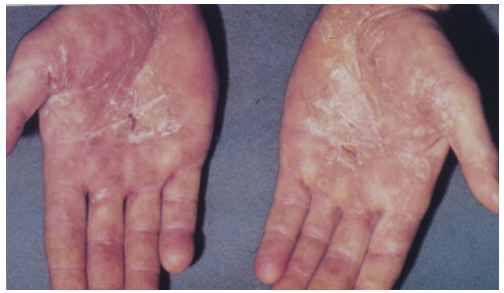
Condyloma lata – very infectious!

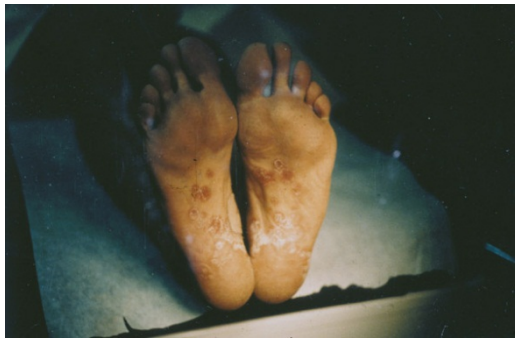


Alopecia

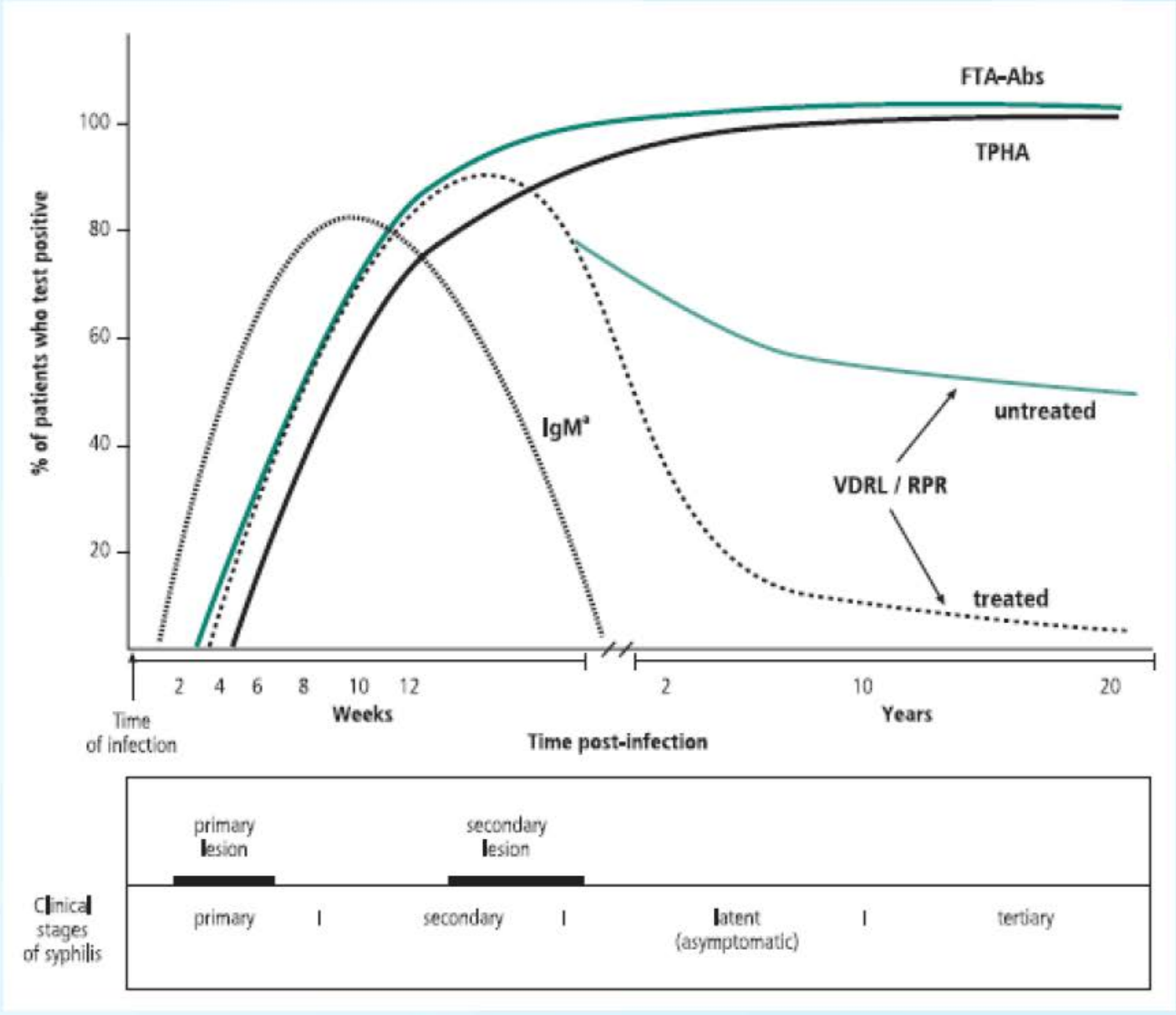


Palmar and plantar rash





# Serologic reactivity in syphilis patients




Peeling et al. / Bulletin of the World Health Organization / 2004 / Vol. 82 / No. 6

# Serologic Testing for Syphilis

- Serologic detection requires the detection of two types of antibodies
  - Non-treponemal antibodies
    - Directed against lipoidal antigens
    - RPR and VDRL, TRUST
  - Treponemal antibodies
    - Antibodies directed against *T. pallidum* proteins
    - TP-PA, MHA-TP, FTA-ABS, EIAs, CIAs, MBIA

Slide courtesy of Jeanne Sheffield

# Causes of False Positive Syphilis Testing

- **Non-treponemal tests**
  - Viral infections
    - Infectious mononucleosis
    - Hepatitis
    - Varicella
    - Measles
  - Lymphoma
  - TB
  - Malaria
  - Endocarditis
  - Connective tissue disease
  - Pregnancy
  - Abuse of injection drugs

- **Treponemal tests**
  - Other spirochetal illnesses (e.g. Lyme, leptospirosis, rat-bite fever, relapsing fever, yaws, pinta)
  - But note, VDRL is non-reactive in Lyme!!!

AAP Red Book

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# Evolution of Syphilis Test

**We still make the diagnosis of syphilis infection by serology.**
**We do NOT have a direct test for the organism itself.**

**… but concerns about sensitivity & specificity abound**

**Fakile Y, STD Prevention Conference, 2016**
**https://cdc.confex.com/cdc/std2016/webprogram/Paper38173.html**

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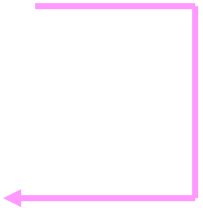
# Dilutions of Non-specific Tests (RPR/VDRL)

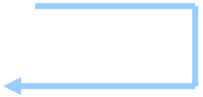
**Check day-of-treatment titers to provide best baseline for management**

**Pandey et al., *CID* 2022**

1 : 1024
1 : 512
1 : 256
1 : 128
1 : 64
1 : 32
1 : 16
1 : 8
1 : 4
1 : 2
1 : 1



**2 dilutions or “4 fold” decline**



**1 dilution**

**Consult with public health for prior titer/tx hx in U.S. and sometimes beyond**

# Syphilis 2021 Guideline Update:

## No changes to stage-specific treatment

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**Recommended Regimen for Primary and Secondary Syphilis* Among Adults**

**Benzathine penicillin G** 2.4 million units IM in a single dose

* Recommendations for treating syphilis among persons with HIV infection and pregnant women are discussed elsewhere in this report (see Syphilis Among Persons with HIV Infection; Syphilis During Pregnancy).

CDC Dear Colleague Letter

**Clinical Reminders during Bicillin L-A® Shortage**

July 20, 2023

https://www.cdc.gov/std/dstdp/dcl/2023-july-20-Mena-BicillinLA.htm

**Recommended Regimens for Latent Syphilis* Among Adults**

**Early latent syphilis: Benzathine penicillin G** 2.4 million units IM in a single dose

**Late latent syphilis: Benzathine penicillin G** 7.2 million units total, administered as 3 doses of 2.4 million units IM each at 1-week intervals

* Recommendations for treating syphilis in persons with HIV and pregnant women are discussed elsewhere in this report (see Syphilis Among Persons with HIV Infection; Syphilis During Pregnancy).

**Recommended Regimen for Neurosyphilis, Ocular Syphilis, or Otosyphilis Among Adults**

**Aqueous crystalline penicillin G** 18–24 million units per day, administered as 3–4 million units IV every 4 hours or continuous infusion for 10–14 days

# Syphilis 2021 Guideline Update:
## What to do with RPR Titers that Don't Respond Appropriately

National Network of STD Clinical Prevention Training Centers

- **Lack of 4-fold decline in titers** after waiting **full 12 mos** following therapy for early syphilis, or **full 24 mos** following therapy for late syphilis:
  - Any neurological signs/symptoms? **If yes, perform immediate LP**
  - Could the patient have been reinfected? **If yes, treat**
  - If both of the above are negative, you can either follow the patient carefully or you can give additional antibiotics, but several observational studies suggest **NO short or intermediate-term benefits to additional antibiotics.**
- **4-fold increase in titers** after appropriate therapy:
  - Any neurological signs/symptoms? **If yes, perform immediate LP**
  - Could the patient have been reinfected? **If yes, treat**
  - If the patient denies the possibility of reinfection, and the titer continues to be elevated when repeated two weeks later, **consider performing a LP**

Slide courtesy of Khalil Ghanem

Screen for neuro-ocular-otic syphilis!

Symptoms occur in ~1-5% of secondary syphilis cases!

Mathew et al.,
*Invest Ophthalmol Vis Sci* 2014

**Screening Questions for Neurosyphilis (Including Ocular and Otosyphilis)**

| Questions | | |
|---|---|---|
| Symptoms of Otosyphilis | | |
| 1) Have you recently had new trouble hearing? | ☐ Yes – refer to ENT | ☐ No |
| 2) Do you have ringing in your ears? | ☐ Yes – refer to ENT | ☐ No |
| Symptoms of Ocular syphilis | | |
| 3) Have you recently had a change in vision? | ☐ Yes – refer to ophthalmology | ☐ No |
| 4) Do you see flashing lights? | ☐ Yes – refer to ophthalmology | ☐ No |
| 5) Do you see spots that move or float by in your vision? | ☐ Yes – refer to ophthalmology | ☐ No |
| 6) Have you had any blurring of your vision? | ☐ Yes – refer to ophthalmology | ☐ No |
| Symptoms of neurosyphilis | | |
| 7) Are you having headaches? | ☐ Yes | ☐ No |
| 8) Have you recently been confused? | ☐ Yes | ☐ No |
| 9) Has your memory recently gotten worse? | ☐ Yes | ☐ No |
| 10) Do you have trouble concentrating? | ☐ Yes | ☐ No |
| 11) Do you feel that your personality has recently changed? | ☐ Yes | ☐ No |
| 12) Are you having a new problem walking? | ☐ Yes | ☐ No |
| 13) Do you have weakness or numbness in your legs? | ☐ Yes | ☐ No |

Medical providers should consider evaluation and treatment for neurosyphilis in persons with new persistent headaches rated as moderate or greater; new change in vision, including loss, blurring, seeing spots or flashing lights; new change in hearing, including loss, muffling or tinnitus; new and persistent change in personality, memory or judgment; new numbness in both legs; or new gait incoordination.

**HIV / STD Program**
January 21, 2015

Public Health
Seattle & King County

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# Syphilis 2021 Guideline Update:
## CSF Examination

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Collaborative decision-making with elderly patients and families about new neuro s&sx

- Perform a lumbar puncture (LP) in persons who:
  - **Have neurological signs and symptoms**
  - Are diagnosed with tertiary syphilis (cardiovascular, gummas)
  - Consider in those who are asymptomatic but whose serological titers increase four-fold after stage-appropriate therapy and in whom the likelihood of reinfection is low
- No data to support routine LP in asymptomatic PWH
- No need for follow-up LP 6 months after the diagnosis and treatment of neurosyphilis in HIV uninfected or PWH who are on ART if they improve clinically, and their serological titers are responding appropriately

# Syphilis 2021 Guideline Update:
## Otic and Ocular Syphilis

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### Otosyphilis

- **Clinical manifestations**: cochleovestibular dysfunction and syphilis infection without an alternate diagnosis; ~50% bilateral
  - Symptoms: **Hearing loss, vertigo, and/or tinnitus** (ringing in the ears)
  - Diagnosis is presumptive; **CSF examination is normal in 90% of cases and is NOT recommended if patient only has otic signs and symptoms**
- **Immediate referral for evaluation**
- **Therapy**: IV penicillin (+/- corticosteroids)

### Ocular Syphilis

- Clinical manifestations: any portion of the eye; any ocular manifestation;
  - Symptoms: Redness, pain, floaters, flashing lights, visual acuity loss
  - Diagnosis is presumptive; **CSF examination is normal in 40% of cases and is NOT recommended if patient only has ocular signs and symptoms**
- **Immediate ophthalmological examination**
- **Therapy**: IV penicillin (+ corticosteroids)

Two-for-One Deal

# CLINICAL PEARLS IN PREGNANCY

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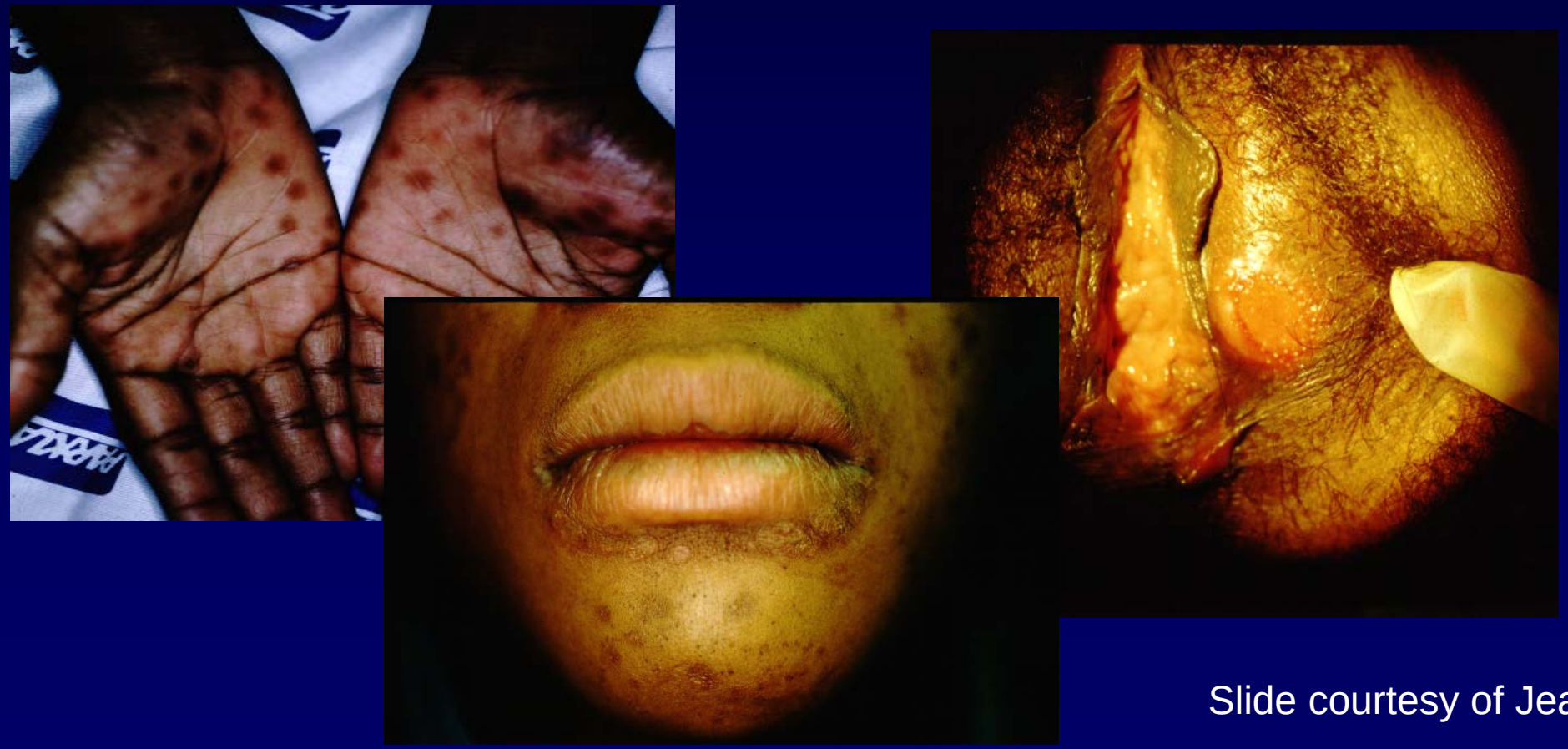
# The only ways to prevent congenital syphilis are to prevent, test, and treat maternal syphilis



Slide courtesy of Jeanne Sheffield

# Transmission of Congenital Syphilis

- Transplacental (as early as 9-10 wks gestation, but at any stage of pregnancy), or via a lesion present at delivery

- Rate dependent on stage of syphilis in mom
  - Primary or secondary syphilis: 60%-100% transmission
  - Late latent syphilis: 13% transmission or less

- Untreated syphilis during pregnancy can lead to spontaneous abortion, stillbirth or perinatal death in 40% of pregnancies



Remington, 2006

# Clinical Features

- Pregnancy has little effect on the course of syphilis
- Syphilis has a major impact on the course and outcome of pregnancy
  - Abortion and Stillbirth
  - Preterm Delivery
  - Congenital Infection

Slide courtesy of Jeanne Sheffield

# Nontreponemal Titer Decline Following Maternal Treatment

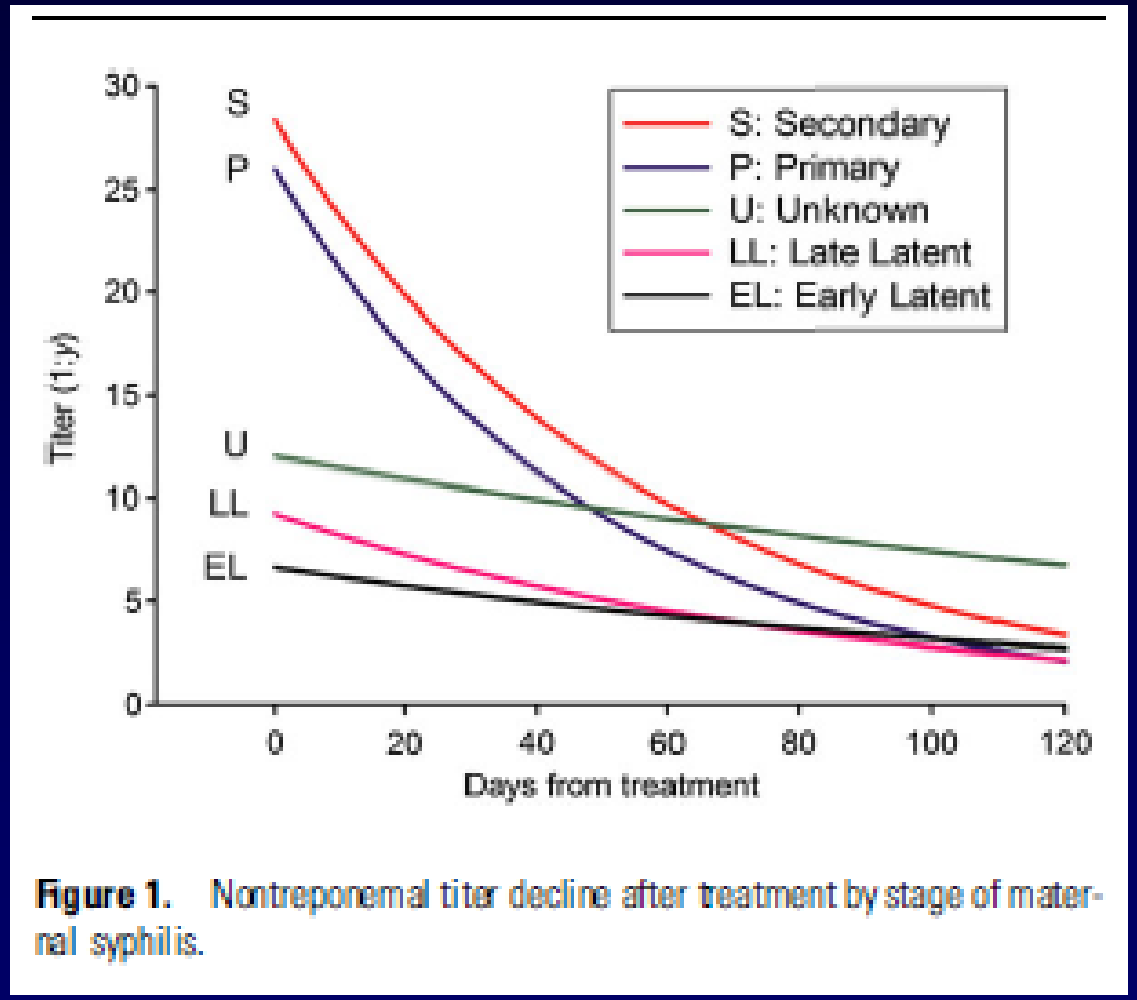



**Figure 1.** Nontreponemal titer decline after treatment by stage of maternal syphilis.

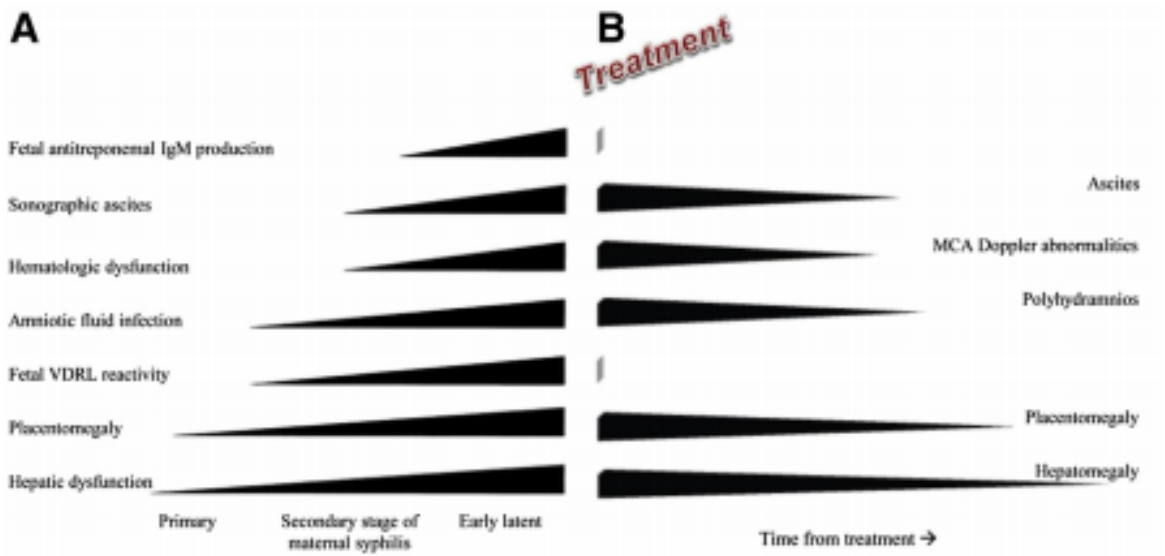
Rac MW et al CID 2015:60

Slide courtesy of Jeanne Sheffield

# Timeline to resolution of fetal lab and ultrasound findings following treatment of maternal syphilis

FIGURE 2

**Pathophysiology of fetal syphilis before and after maternal and fetal syphilotherapy**



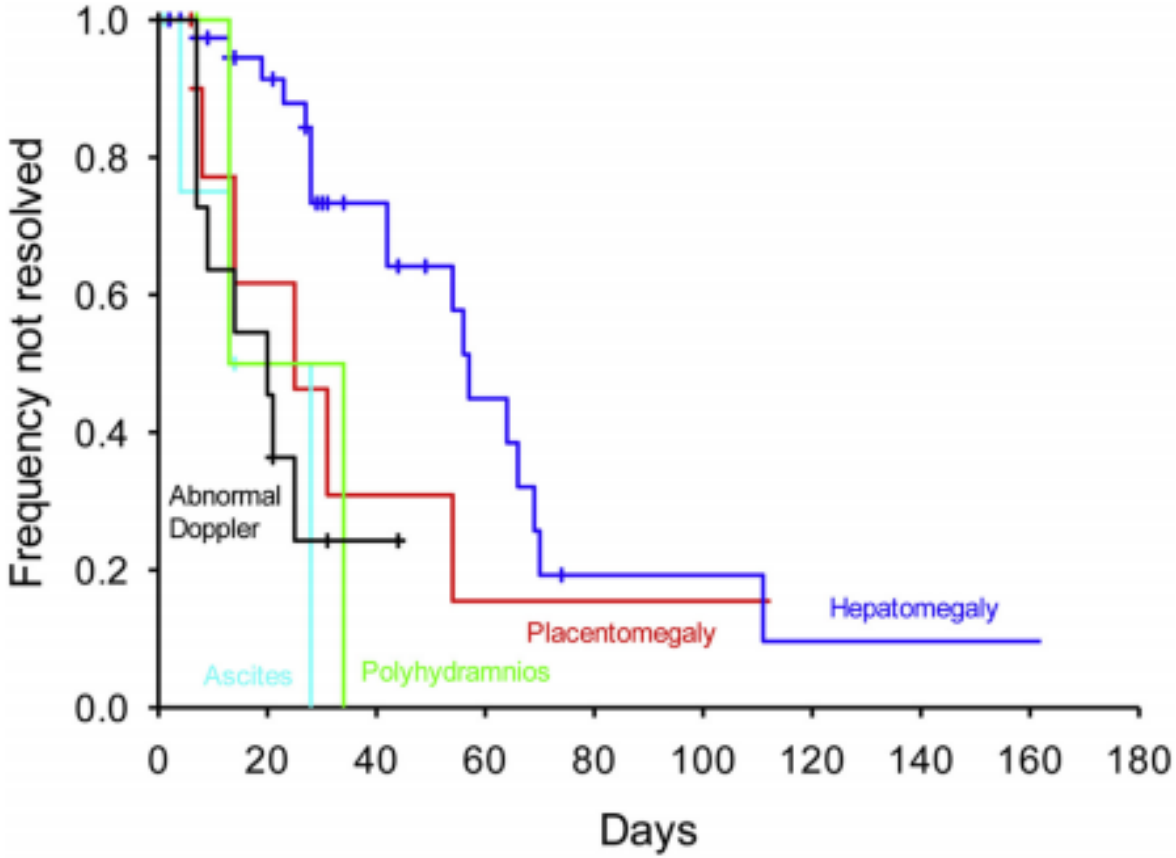

**A,** Progression of fetal syphilis proposed by Hollier et al in 2001[7]; **B,** resolution of fetal syphilis after treatment.

*IgM*, immunoglobulin M; *MCA*, middle cerebral artery; *VDRL*, venereal disease research laboratory.

*Rac. Ultrasound findings of congenital syphilis. Am J Obstet Gynecol 2014.*

FIGURE 1

**Timeline to resolution of abnormal ultrasound findings**




*Rac. Ultrasound findings of congenital syphilis. Am J Obstet Gynecol 2014.*

Rac MW et al AJOG 2014

Slide courtesy of Jeanne Sheffield

# 2021 Syphilis Update: Syphilis During Pregnancy

National Network of STD Clinical Prevention Training Centers

**Treatment – no updates. PCN still treatment of choice for pregnant women.**

- Certain evidence indicates that additional therapy is beneficial for pregnant women to prevent congenital syphilis. For women who have primary, secondary, or early latent syphilis, a second dose of benzathine penicillin G 2.4 million units IM can be administered 1 week after the initial dose
- Missed doses **>9 days** between doses are not acceptable for pregnant women receiving therapy for late latent syphilis

Slide courtesy of Khalil Ghanem

# Penicillin Desensitization

**For patients with documented penicillin allergy for whom no treatment alternatives exist**

| Dose | Penicillin V Suspension | Amount | Penicillin V Suspension | Cumulative Dose | Route |
|---|---|---|---|---|---|
| | *Units/mL* | *mL* | *Units* | *Units* | |
| 1 | 1,000 | 0.1 | 100 | 100 | P.O. |
| 2 | 1,000 | 0.2 | 200 | 300 | P.O. |
| 3 | 1,000 | 0.4 | 400 | 700 | P.O. |
| 4 | 1,000 | 0.8 | 800 | 1,500 | P.O. |
| 5 | 1,000 | 1.6 | 1,600 | 3,100 | P.O. |
| 6 | 1,000 | 3.2 | 3,200 | 6,300 | P.O. |
| 7 | 1,000 | 6.4 | 6,400 | 12,700 | P.O. |
| 8 | 10,000 | 1.2 | 12,000 | 24,700 | P.O. |
| 9 | 10,000 | 2.4 | 24,000 | 48,700 | P.O. |
| 10 | 10,000 | 4.8 | 48,000 | 96,700 | P.O. |
| 11 | 80,000 | 1.0 | 80,000 | 176,700 | P.O. |
| 12 | 80,000 | 2.0 | 160,000 | 336,700 | P.O. |
| 13 | 80,000 | 4.0 | 320,000 | 656,700 | P.O. |
| 14 | 80,000 | 8.0 | 640,000 | 1,296,700 | P.O. |
| Wait 30 minutes | | | | | |
| 15 | 2,400,000 Units Benzathine Penicillin G | | | | I.M. |

But does patient need this?

Not if absence of allergy can be documented …

https://www.cdc.gov/std/treatment-guidelines/penicillin-allergy.htm

Wendel, GD et al. N Engl J Med 1985: 312:1229-32

Slide courtesy of Jeanne Sheffield

# Summary of Syphilis Management: Non-Pregnant vs. Pregnant Individuals with Trep + Non-Trep Positivity

| | Non-Pregnant | Pregnant |
|---|---|---|
| Treatment | Stage-specific treatment | BUT:<br>• Primary, secondary, or early latent syphilis: 2nd dose of benzathine penicillin G 2.4 million units IM can be administered 1 wk after initial dose<br>• Only penicillin recommended (no doxycycline)<br>o If penicillin-allergic, desensitize, then treat with penicillin<br>• Missed doses >9 days not acceptable – repeat full course |
| Management | • Screen for neuro, ocular, and otic symptoms<br>• Obtain day-of treatment non-treponemal test titers<br>• Repeat HIV and other STI testing | |
| | | Do not delay, BUT in 2nd half of pregnancy:<br>• Counsel to seek obstetric care if any fever, contractions, or decrease in fetal movements, or consider fetal monitoring for several hours after dose<br>o Jarisch-Herxheimer reaction could theoretically precipitate preterm labor or fetal distress<br>• Perform level II ultrasound<br>o Sonographic signs of fetal or placental syphilis (e.g. hepatomegaly, ascites, hydrops, fetal anemia, or a thickened placenta) indicate greater risk for fetal treatment failure - manage in consultation with obstetric specialists |
| Follow-up | Stage-specific frequency | BUT:<br>• Titers always repeated at delivery<br>• Titers generally not repeated before 8 wks post-treatment<br>o Unless reinfection or treatment failure is suspected |

Despite best efforts, infant cases may break through

# CLINICAL PEARLS FOR INFANT MANAGEMENT

Sylvie Ratelle
STD/HIV
Prevention Training
Center *of New England*
A Project of the Division of STD Prevention
Massachusetts Department of Public Health
Funded by the CDC

# Congenital Syphilis Rarely Occurs, Even After Maternal Treatment for Syphilis During Pregnancy

**Table III.** Case:control comparison (a 1:1 match, based on the stage of syphilis and the gestational age at treatment)

| *Characteristic* | *Cases (n = 43)* | *Controls (n = 42)* | *P value* |
|---|---|---|---|
| Maternal age (y; mean ± SD) | 23.2 ± 6.1 | 22.9 ± 4.9 | .82 |
| Race (n) | | | .17 |
| African American | 25 (58%) | 21 (50%) | |
| White | 1 (2%) | 6 (14%) | |
| Hispanic | 17 (40%) | 13 (31%) | |
| Other | 0 (0%) | 2 (4%) | |
| Intravenous drug use (n) | 5 (14%) | 13 (31%) | .09 |
| Treatment VDRL titer* [1:x] | 32 [16:64] | 16 [1:32] | .005 |
| Delivery VDRL titer* [1:x] | 16 [8:32] | 8 [2:8] | <.0001 |
| Umbilical cord VDRL titer* [1:x] | 16 [8:64] | 4 [2:4] | <.0001 |
| Gestational age at delivery (wk; mean ± SD) | 34.4 ± 4.9 | 38.8 ± 2.1 | <.001 |
| Delivery estimated gestational age, ≤ 36 wk (n) | 23 (55%) | 6 (15%) | <.001 |
| Days treatment to delivery (mean ± SD) | 29 ± 39 | 56 ± 43 | .004 |
| ≤30 Days from treatment to delivery (n) | 28 (67%) | 12 (29%) | <.001 |

*Results expressed as median [quartile 1, quartile 3].

- **High VDRL titers at treatment and delivery**
- **Earlier maternal stage of syphilis (?higher treponemal burden)**
- **Shorter interval (<30 days) between treatment and delivery**
- **Delivery of preterm infant (≤36 weeks gestation)**

**… associated with congenitally infected infant**



Sheffield *et al.*, *Am J Obstet Gynecol* 2002

# Timing of Clinical Presentation

- Most (~80%) infected infants are asymptomatic at birth
- In 2/3 of untreated cases, signs begin to appear in weeks 3-8 of life
- Nearly all cases have symptoms within 3 months
- Diagnosis delayed until infant presents weeks later with non-specific complaints (rhinitis, pneumonia, FTT)

# Syphilis-Exposed Infants: General Principles of Evaluation and Treatment

- Minimum lab evaluation under all scenarios includes maternal – infant non-treponemal test titers at delivery
  - Infant serologic testing must be done on serum, not on cord blood
    - AAP: cord blood false positives (5-10%) and false negatives (5-20%) can occur
- IV penicillin generally advised in proven or highly probable congenital syphilis because of high probability of CNS involvement and therefore need for treponemocidal levels of penicillin in CNS
- There are no good alternatives to penicillin treatment

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# CNS Involvement Common in Congenital Syphilis

- Frequency was 22% (17/76) infants born to untreated mothers, based on positive CSF rabbit infectivity test (RIT)
  - 41% of those with abnormal clinical, laboratory, or radiographic evaluation
  - 60% of those with abnormal physical exam
  - 3 of these infants had normal CSF indices
- Sensitivity & specificity of CSF indices compared to CSF RIT:

| | Sensitivity | Specificity |
|---|---|---|
| CSF VRDL reactive | 53% | 90% |
| CSF pleiocytosis | 38% | 88% |
| Elevated CSF protein | 56% | 78% |

Michelow et al. *NEJM* 2002

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# 2021 Syphilis Update: Congenital Syphilis

National Network of STD Clinical Prevention Training Centers

- Four scenarios describe Evaluation and Treatment of Neonates Born to Women With Reactive Non-treponemal and Treponemal Serologic Tests During Pregnancy (e.g., RPR reactive, TP-PA reactive or EIA reactive, RPR reactive)
  - Scenario 1: Confirmed Proven or Highly Probable Congenital Syphilis
  - Scenario 2: Possible Congenital Syphilis
  - Scenario 3: Congenital Syphilis Less Likely
  - Scenario 4: Congenital Syphilis Unlikely
- **New scenarios** describe Management of Neonates Born to Women Screened During Pregnancy by Reverse Sequence Algorithm who have reactive treponemal serologic tests and a nonreactive nontreponemal serologic test

# Final Message

- The battle to decrease the congenital syphilis rate is waged on four fronts: the obstetric, the pediatric, the primary care and the public health service
- Only by working together can we hope to eradicate congenital syphilis

Slide courtesy of Jeanne Sheffield

# RESOURCES

https://www.cdc.gov/std/treatment-guidelines/default.htm

Sexually Transmitted Infections Treatment Guidelines, 2021

# STI Treatment Guidelines

## 2021 RECOMMENDATIONS NOW AVAILABLE

**Misnomer!**

- **Prevention**
- **Screening**
- **Counseling**
- **Management**

**AND**

- **Treatment Guidelines**

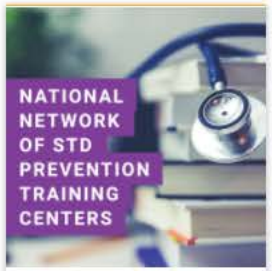
### STI Treatment Guidelines Update

CDC's Sexually Transmitted Infections (STI) Treatment Guidelines, 2021 provides current evidence-based prevention, diagnostic and treatment recommendations that replace the 2015 guidance. The recommendations are intended to be a source for clinical guidance. Healthcare providers should always assess patients based on their clinical circumstances and local burden.

2021 Mobile App in Development
Learn how to use the interim, mobile-friendly solution.


View the full STI Treatment Guidelines.


Access print-friendly versions of the wall chart, pocket guide, and guidelines.




Explore STD trainings, technical assistance, clinical consultation services, and more.


Learn about recommendations and tools to help healthcare settings improve STD care services.

# The 2021 CDC STI Treatment Guidelines are here …

- Expanded **extragenital screening** recommendations in adolescents and young adult women
- New section on ***Mycoplasma genitalium***
- Removal of LP recommendation for purely **ocular and otic syphilis**
- Changes in recommended treatment for **chlamydia and gonorrhea** affect recommendations for syndromic treatment (e.g. cervicitis, urethritis, PID) and sexual assault
- Secnidazole for **BV**
- Metronidazole
  - Preference for 7-day over single-dose regimen for **trichomoniasis** (Kissinger P et al., *Lancet ID* 2018)
  - Added to preferred **PID** treatment regimen (Wiesenfeld HC et al., *CID* 2020)
  - **Alcohol abstention no longer recommended by CDC** (ethanol alone may explain previous reports; metronidazole does not inhibit acetaldehyde dehydrogenase, as occurs with disulfiram)

# Want to know more about STDs?

## *There's an app for that.*


CDC STI Treatment Guidelines App for Apple and Android

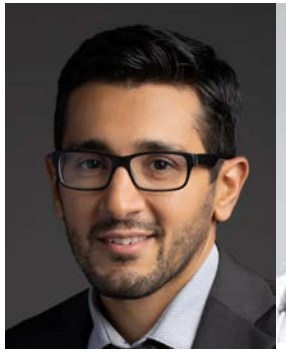
Available **NOW**, **FREE!** (accept no competitors)

Search "STD Treatment" in App store

National Network of STD Clinical Prevention Training Centers

# STD Clinical Consultation Network

- Provides STI/STD clinical consultation services within 1-5 business days, depending on urgency, to clinicians nationally
- Consultation request is linked to your regional PTC's STI/STD expert faculty
- Just a click away: [www.STDCCN.org](http://www.STDCCN.org)
- Also embedded in Treatment Guidelines App!



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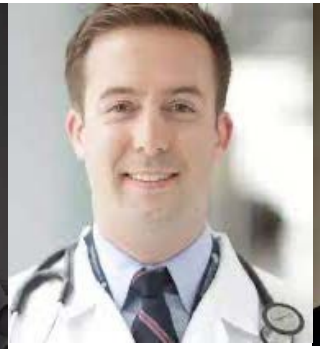

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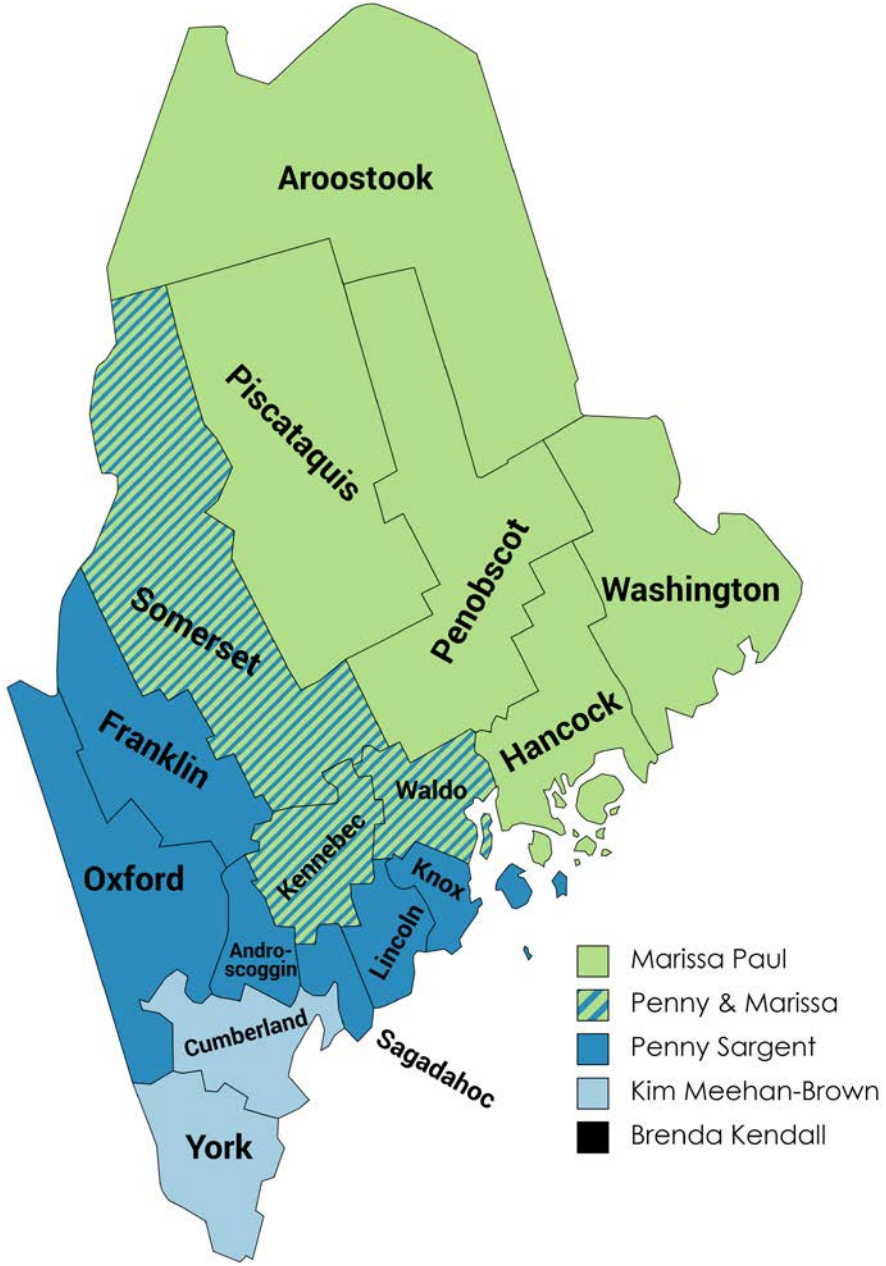
National Network of STD Clinical Prevention Training Centers




# Disease Intervention Specialists (DIS)

Public health professionals who use contact tracing and case investigation to prevent and control sexually transmitted infections

- **Trained counselors:** help providers inform patients about positive results
- **Investigators:** help locate patients who have been tested but did not return for results or treatment
- **Educators:** provide education on STIs, testing, and treatments

# Case Investigation & Management

| Treatment Call | Interview | Partner Services |
| --- | --- | --- |
| • Verify patient information<br>• Symptoms at time of visit<br>• Sexual history<br>• Treatment plan | • Review recommendations<br>• Prevention counseling<br>• Discuss prophylaxis (PrEP, PEP, mpox vaccine, etc.)<br>• Partner elicitation | • Notification of exposure<br>• Linkage to care<br>• Review treatment recommendations |

# Contact Us

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**Disease Reporting**
1.800.821.5821 (24 hours a day)

# Summary

- Review [congenital] syphilis testing recommendations and epidemiology in Maine
  - At least once in pregnancy, at first prenatal visit, and again at 28 weeks and at delivery, if high-risk
- Review syphilis presentations and natural history
  - Identify and treat complications and prevent sequelae
- Apply syphilis diagnostic testing algorithms and interpret testing results
  - Serologic testing is imperfect, and needs to be interpreted in the context of history and exam
- Review stage-specific syphilis treatment and management
  - Older studies provide details about when to expect treatment response
- Provide clinical and public health resources
  - CDC STI Guidelines app
  - www.STDCCN.org from the National Network of STD Clinical Prevention Training Centers
  - Maine-specific resources

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# Questions?

# Continuing Education

- Continuing education credits are available for this learning activity.
- After the program, participants will receive an email with link to complete a short evaluation.
- Upon completion of evaluation, CE certificate will be emailed to you.
- Today's webinar was recorded, and after the program, participants will also receive an email with a link to the recording.

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