Update on Syphilis in Women and Congenital Syphilis for Pediatric Providers

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California Department of Public Health
STD Control Branch
Overview

• Summarize epidemiologic trends in syphilis in women and congenital syphilis in California
• Review recommended treatment for syphilis in pregnancy
• Describe characteristics of congenital syphilis cases in California and appropriate evaluation and management
Chlamydia, Gonorrhea, and Early Syphilis

- **Chlamydia**: 504.4 (N=198,503)
- **Gonorrhea**: 164.3 (N=64,677)
- **Early Syphilis**: 28.5 (N=11,222)
Early Syphilis*, Number of Cases by Gender & Gender of Sex Partners, California, 1996–2016

* Includes primary, secondary, and early latent syphilis.
Female Early Syphilis* Cases
California, 2009–2016

* Includes primary, secondary, and early latent syphilis.
Early Syphilis*
Incidence Rates by Gender and Age Group (in years)
California, 2016

* Includes primary, secondary, and early latent syphilis.
Early Syphilis*, Incidence Rates by County and Gender
California, 2016

* Includes primary, secondary, and early latent syphilis.
Early Syphilis*
Incidence Rates for Females by Race/Ethnicity
California, 2007–2016

Note: NA/AN = Native American/Alaskan Native, A/PI = Asian/Pacific Islander.
Race/ethnicity “Not Specified” ranged from 0% to 6.7% of cases for females in any given year.
* Includes primary, secondary, and early latent syphilis.

MSM=Men who have sex w/men, MSW=Men who have sex w/women, MSM&W=Men who have sex with men & women

* Includes primary, secondary, and early latent syphilis.
California congenital syphilis cases represented 33% of all CS cases in the U.S. in 2016.

Note: The Modified Kaufman Criteria were used through 1989. The CDC Case Definition (MMWR 1989; 48: 828) was used effective January 1, 1990. California data prior to 1985 include all cases of congenital syphilis, regardless of age.
# Congenital Syphilis — States With Highest Number of Cases and Highest Rates per 100,000 Live Births, 2016

<table>
<thead>
<tr>
<th>States with Highest Number of Cases:</th>
<th>States with Highest Rates:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rank</strong></td>
<td><strong>State</strong></td>
</tr>
<tr>
<td>1</td>
<td>California</td>
</tr>
<tr>
<td>2</td>
<td>Texas</td>
</tr>
<tr>
<td>3</td>
<td>Florida</td>
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<td>4</td>
<td>Louisiana</td>
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<td>5</td>
<td>Georgia</td>
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<td>6</td>
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<td>North Carolina</td>
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<td>Arizona</td>
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<td>10</td>
<td>New York</td>
</tr>
<tr>
<td>10</td>
<td>Michigan</td>
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</table>
Congenital Syphilis Cases versus Female Early Syphilis* Incidence Rates, California, 2010–2016

Early Syphilis Rate per 100,000 Females of Childbearing Age (15-44 years)

Number of Congenital Syphilis Cases

Number ofCongenital Cases

Early Syphilis Rate

2012-2016 Congenital Syphilis Cases ↑ >500%

* Includes primary, secondary, and early latent syphilis.
Syphilis Overview

• Causative organism: *Treponema pallidum*, a spirochete bacterium

• Transmission:
  – Sexual (intimate skin-to-skin contact)
  – Vertical
  – Blood

• Causes systemic infection

• Characterized by episodes of active disease during which patients have signs/symptoms of infection, interrupted by periods of latent infection
  – Lab testing is required to diagnose patients

• Incubation period: 10-90 days

Image courtesy: Gregory Melcher, UC Davis
Susan Philip, SF DPH & UCSF
Prevention of congenital syphilis requires prevention/treatment of maternal syphilis
Syphilis Natural History

Exposure 30-50%
- Incubation Period
  - 3-4 weeks

Primary
- 2-6 weeks

Secondary
- Possible relapse
  - After 3-8 weeks lesions disappear spontaneously

Latent 30%
- 2-20 years

Tertiary

Neurosyphilis can occur at any stage
Syphilis Staging Flowchart

SIGNS OR SYMPTOMS?

- Chancre
- Rash, etc.

YES

- PRIMARY
- SECONDARY

NO

LATENT

ANY IN PAST YEAR?
- Negative syphilis serology
- Known contact to an early case
- Good history of typical signs/symptoms
- 4-fold increase in titer
- Only possible exposure was this year

YES

- EARLY LATENT (< 1 year)

NO

- LATE LATENT or UNKNOWN DURATION
In pregnancy, benzathine penicillin is the only recommended therapy. No alternatives.

**In pregnancy, should adhere to 7 days between doses**

*Bicillin L-A is the trade name. DO NOT USE Bicillin C-R!*

CDC 2015 STD Treatment Guidelines

[www.cdc.gov/std/treatment]
Diagnosing Syphilis

• Syphilis is diagnosed by:
  – Reviewing patient history
  – Assessing sexual risk
  – Conducting a physical exam
  – Interpreting serologic test results
Syphilis Screening Paradigm

**REVERSE SEQUENCE**

**Treponemal tests (e.g., EIA, CIA, MBIA)**
- *TP-SPECIFIC ANTIBODIES*
- QUALITATIVE
- USUALLY DETECTABLE FOR LIFE
  - REACTIVITY DECLINES WITH TIME

**Non-treponemal tests (e.g., RPR, VDRL)**
- NON-SPECIFIC ANTIBODIES TO LIPOIDAL ANTIGENS
  - QUANTITATIVE
  - REACTIVITY DECLINES WITH TIME

Need both types of serologic tests to make syphilis diagnosis; Use of only one type of test is insufficient.
Syphilis serologic screening algorithms

Traditional

- Quantitative RPR
  - RPR+
    - TP-PA or other trep. test
      - TP-PA+ Syphilis (past or present)
      - TP-PA- Syphilis unlikely
  - RPR-

Reverse sequence

- EIA or CIA
  - EIA/CIA+
  - EIA/CIA-
- Quantitative RPR
  - RPR+
    - Syphilis (past or present)
  - RPR-
    - TP-PA
      - TP-PA+ Syphilis (past or present)
      - TP-PA- Syphilis unlikely
Diagnostic Challenges

False negatives
• Early primary and late latent stages
  – Serology may be negative in up to 25% of primary syphilis cases
• Prozone reaction (RPR/VDRL)

Biologic False Positives
• Non-trep test positive with confirmatory Treponemal test negative
• Viral illnesses including HIV, recent immunizations, autoimmune and chronic diseases

Discordant serology
• EIA or CIA + and RPR −

Use of Treponemal Immunoassays for Screening and Diagnosis of Syphilis

Guidance for Medical Providers and Laboratories in California

February 2016

CDPH has materials available online: std.ca.gov
Brief Clinical Overview of Congenital Syphilis
Early Congenital Syphilis (<age 2)
Common Presentations

- Asymptomatic presentations are common
  - ~2/3 infants born with CS are asymptomatic at birth – if untreated will develop symptoms
- Bone abnormalities
- Hepatosplenomegaly +/- jaundice
  - Hepatomegaly present in almost all infants with CS
- Skin rash
- Nasal discharge (“snuffles”)
- Anemia, thrombocytopenia
- Neurologic abnormalities
- Pneumonia
- Others
Syphilitic Rash

Photos courtesy of Public Health Image Library, CDC and Dr. Norman Cole
Late Congenital Syphilis (>age 2)  
Common Presentations

- Hearing loss (puberty – adulthood).
  - Can develop suddenly
- Interstitial keratitis (5 years old – adulthood)
  - Inflammation of tissue of cornea, can lead to vision loss
- Bone or tooth abnormalities
- Neurologic abnormalities
- Gummas (granulomatous inflammatory response to spirochetes) in the skin or mucous membranes
- Others
Interstitial Keratitis

Photos courtesy of Public Health Image Library, CDC/Susan Lindsley
Hutchinson’s Teeth

Permanent incisor teeth are narrow and notched.
Perforation of hard palate

Photos courtesy of Public Health Image Library, CDC/Robert Sumpter
Clutton’s Joints

Saber Shins

Photos courtesy of Public Health Image Library, CDC/J. Pledger
Syphilis in Pregnancy and Congenital Syphilis
Screening Recommendations – CDC

• All pregnant women should be screened for syphilis at the first prenatal visit
• Women who are at high risk for syphilis, live in areas of high syphilis morbidity, or are previously untested should be screened again both:
  – Early in the third trimester (approx 28 weeks GA)
  – At delivery

Penicillin treatment of pregnant women with syphilis is highly effective at preventing CS
Women who would benefit from additional syphilis testing in the 3rd trimester and at delivery include those who:

- Have signs and symptoms of syphilis infection
- Live in areas with high rates of syphilis, particularly among females
- Were diagnosed with an STD during pregnancy
- Receive late or limited prenatal care
- Have partners that may have other partners, or partners with male partners
- Have history of incarceration
- Are involved with substance use or exchange sex for money, housing, or other resources

Routine risk assessment should be conducted throughout pregnancy to assess risk factors and inform the need for additional testing.
CDC Screening Recommendations

• No infant should leave the hospital without the maternal serologic status having been determined at least once during pregnancy, and again at delivery if at risk.
  – If mother presents at delivery with no prenatal care, STAT RPR should be performed
  – If baby has congenital syphilis and is asymptomatic, there is still an opportunity to treat the infant to prevent further morbidity

• Any woman who delivers a stillborn infant should be tested for syphilis
Treatment of Syphilis in Pregnancy

• The only treatment of syphilis in pregnancy is penicillin. There are no alternatives.
• Pregnant women should be treated with the penicillin regimen appropriate for their stage of infection.
  – Some experts recommend a 2nd dose of benzathine penicillin G be given a week after the initial dose in early syphilis
• Pregnant women with penicillin allergy should be desensitized and treated with penicillin.

All patients with syphilis should be tested for HIV.
Highest risk of treatment failure occurs during early syphilis

<table>
<thead>
<tr>
<th>Stage</th>
<th>Success/Total treated</th>
<th>Percentage (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>27/27</td>
<td>100 (87.2, 100)</td>
</tr>
<tr>
<td>Secondary</td>
<td>71/75*</td>
<td>94.7 (86.9, 98.5)</td>
</tr>
<tr>
<td>Early latent</td>
<td>100/102</td>
<td>98 (93.1, 99.8)</td>
</tr>
<tr>
<td>Late latent</td>
<td>136/136</td>
<td>100 (97.3, 100)</td>
</tr>
<tr>
<td>Total</td>
<td>334/340</td>
<td>98.2 (96.2, 99.3)</td>
</tr>
</tbody>
</table>

CI = confidence interval.
* P = .03 compared with other groups, χ².

Overall, maternal treatment is highly effective in the prevention of CS

Maternal treatment more likely to be successful when administered at earlier gestational age

Table 4. Success of Maternal Treatment in Preventing Congenital Syphilis by Gestational Age

<table>
<thead>
<tr>
<th>Gestational age</th>
<th>Success/Total treated</th>
<th>Percentage (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>≤20 wk</td>
<td>152/153</td>
<td>99.4 (96.4, 100)</td>
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<tr>
<td>21–25 wk</td>
<td>51/51</td>
<td>100 (93.0, 100)</td>
</tr>
<tr>
<td>26–30 wk</td>
<td>58/59</td>
<td>98.3 (90.9, 100)</td>
</tr>
<tr>
<td>31–35 wk</td>
<td>44/46</td>
<td>95.6 (85.2, 99.5)</td>
</tr>
<tr>
<td>36–40 wk</td>
<td>26/28</td>
<td>92.9 (76.5, 99.1)</td>
</tr>
<tr>
<td>41–42 wk</td>
<td>3/3</td>
<td>100 (29.2, 100)</td>
</tr>
<tr>
<td>Total</td>
<td>334/340</td>
<td>98.2 (96.2, 99.3)</td>
</tr>
</tbody>
</table>

CI = confidence interval.
P = not significant, $\chi^2$. 

What are common pathways that a woman delivers a baby with CS?

**Woman acquires syphilis prior to pregnancy**
- Not diagnosed, not tested
- Not adequately treated
- SHE BECOMES PREGNANT

**She acquires syphilis during pregnancy**
- Not diagnosed
  (late to prenatal care or no prenatal care, early screen negative and not repeated, seroconverted after birth)
- Not treated
  (treatment not ordered, lost to follow up)
- Late to treatment
  (treatment initiated <30 days prior to delivery)
- Inadequate treatment
  (wrong drug or dose, lack or delay in 2nd or 3rd shots for late latent syphilis)

RARELY, among those diagnosed and treated:
- Maternal treatment failure
- Fetal demise
- Permanent fetal damage prior to treatment
What do we know about the cases?
California Project Area CS Cases 2007-2015:
Infant Characteristics (n=391)

- Stillbirth: 7%
- Signs of CS on exam: 11%
- Long bone abnormalities: 10%
- Reactive CSF VDRL: 9%
- Abnormal CSF: 32%
- Preterm birth: 30%

Credits: Stoltey, Ng
Percent of congenital syphilis cases, by maternal age at delivery: Majority of mothers were ages 20-29

<table>
<thead>
<tr>
<th>Age</th>
<th>% of cases</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 20</td>
<td>8%</td>
<td>32</td>
</tr>
<tr>
<td>20-29</td>
<td>58%</td>
<td>227</td>
</tr>
<tr>
<td>30-39</td>
<td>32%</td>
<td>123</td>
</tr>
<tr>
<td>40-44</td>
<td>1.5%</td>
<td>6</td>
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<tr>
<td>45-49</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>50+</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Unknown</td>
<td></td>
<td>1</td>
</tr>
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</table>

STD Control Branch
Congenital Syphilis
Incidence Rates per 100,000 (L) and Number of Cases (R) by Race/Ethnicity of Mother, California, 2016

Incidence Rates

Number of Cases

NA/AN API Black Latina White

Rev. 1/2017

STD Control Branch
When did mother initiate prenatal care?
Over half of mothers initiated prenatal care only in 3rd trimester or not at all

- 1st trimester (n=75, 19.2%)
- 2nd trimester (n=57, 14.6%)
- 3rd trimester (n=63, 16.1%)
- No prenatal care (n=137, 35.0%)
- Unknown (n=14, 3.6%)
- Received prenatal care, outside CA (n=3, 0.8%)
- Received prenatal care, missing info (n=42, 10.7%)

Nationally, 74% initiate in 1st Trimester; only 6% in 3rd Trimester or not at all (CDC, 2011)
Maternal risk characteristics for interviewed early syphilis cases (n=92)

70% (92 of 132) interviewed

- Methamphetamine use: 22% (n=10) vs. 44% (n=20) for 2007-12 vs. 2013-15
- Exchange of sex for money, drugs: 6.5% (n=3) in 2007-12 and 13% (n=6) in 2013-15
- Jail, juvenile hall, prison: 13% (n=6) in both periods

Risk in 12 months prior to diagnosis
Public Health Response: Points of Intervention to Prevent CS

**Pre-pregnancy**
- Screening/dx/tx
- Timely partner services
- Accessible highly effective contraception

**During pregnancy**
- Linkage to prenatal care
- Screening/dx
- **Timely** treatment appropriate for stage
- **Timely** partner services
- Case management
- Prevent and detect new infection

**Birth**
- Evaluation and treatment of baby
Evaluation of Infants Born to Mothers with Syphilis

• CDC STD Treatment Guidelines have detailed guidance on evaluation and treatment
• Treatment decisions based on:
  – Identification of syphilis in the mother
  – Adequate maternal treatment
  – Clinical, lab, x-ray evidence of syphilis in neonate
  – Comparison of maternal (at delivery) and neonatal nontreponemal titers (same test-preferably same lab)

Maternal non-trep and trep IgG antibodies can transfer via placenta thus complicating interpretation of neonate serologies
Evaluation of Infants (during first month of life) Born to Mothers with Syphilis

- All infants born to women with reactive syphilis serology should be evaluated with a quantitative nontreponemal test (do not use cord blood, which may be contaminated by mother’s blood)
- Thorough physical exam for evidence of congenital syphilis
- Darkfield exam or PCR testing of suspicious lesions or body fluids (e.g., nasal discharge) and placenta
Scenario 1: ”Proven or Highly Probable Congenital Syphilis”

• Abnormal physical exam consistent with congenital syphilis OR
• Serum VDRL/RPR titer that is 4-fold higher than maternal titer OR
• Positive darkfield or PCR of lesions or body fluids (or placenta)

➢ Full work-up and 10 days treatment recommended
“Full” Evaluation for Congenital Syphilis

• Careful physical exam
• CSF analysis for VDRL, cell count and protein
• CBC with differential
• Other tests as indicated, including:
  – X-rays (long bone and chest)
  – Liver function tests
  – Ophthalmologic exam
  – Neuroimaging
  – Auditory brainstem response
Scenario 2: “Possible Congenital Syphilis”

Normal physical exam, Nontrep Titer = or < 4-Fold Maternal Titer

AND

Maternal factors:

- Not treated, inadequately treated, or no documentation of treatment
- OR
- Treatment with erythromycin or other nonstandard regimen
- OR
- Maternal treatment less than 4 weeks prior to delivery

➢ Work-up/Rx:

- Complete evaluation if 10 days treatment not planned
- Complete evaluation not necessary if 10 days treatment given
- If complete evaluation is normal and infant follow-up certain, single dose benzathine PCN, 50,000 U/KG IM may be given
Scenario 3: “Congenital Syphilis Less Likely”

Normal physical exam, Nontrep Titer = or < 4-Fold Maternal Titer

AND

Maternal factors:

- Treated during pregnancy, treatment was appropriate and administered > 4 weeks prior to delivery AND
- No evidence of reinfection or relapse

➢ Work-up/Rx:

- No evaluation needed, but **single dose benzathine PCN 50,000 U/KG IM recommended**
Scenario 4: “Congenital Syphilis Unlikely”

Normal physical exam, Nontrep Titer = or < 4-Fold Maternal Titer AND

Maternal factors:

- Treated adequately before pregnancy AND
- Low and stable nontrep titers before and during pregnancy and at delivery (VDRL < 1:2, RPR < 1:4)

**Work-up/Rx:**

- No evaluation needed, no Rx required (but some experts would give single dose benzathine PCN 50,000 U/KG IM, particularly if follow-up uncertain)
Congenital Syphilis
Treatment for Neonates

• Aqueous crystalline penicillin G 100,000-150,000 units/kg/d, given as 50,000 units/kg/dose IV q12 hours x 7 days, then q8 hours x 3 days (total 10 days)
  OR
• Procaine penicillin G 50,000 units/kg/dose IM qd x 10 days (only for neonates) *current drug shortage

• Single dose (ONLY for scenario 2 w/normal work-up, scenario 3 and 4): Benzathine penicillin G 50,000 units/KG/dose IM in a single dose
Evaluation and treatment of infants and children >=1 month*

- CSF analysis
- CBC, differential
- Other tests as clinically indicated

Treatment:
Aqueous crystalline penicillin G 200,000-300,000 units/kg/day IV, administered as 50,000 units/kg IV q4-6 hours x 10 days

* See CDC STD Treatment Guidelines for full details
Congenital Syphilis: Follow-up

- Serologic testing (RPR) every 2-3 months (whether treatment given or not) until test becomes nonreactive
- Nontreponemal titer should decline by 3 months and be nonreactive by 6 months if treated adequately or uninfected (may take longer if treated after neonatal period)
- Re-evaluate and treat if:
  - Nontreponemal titer persistent at 6-12 months
- If initial CSF is abnormal, repeat at 6 months. If abnormal, retreat
If you would like to customize and distribute within your LHJ, contact Ashley Dockter at ashley.dockter@cdph.ca.gov
Update for Health Care Providers

Concerning Increases in Syphilis in Women and Congenital Syphilis: An Update for California Health Care Providers

The Problem: Increasing Congenital Syphilis in California

California has seen a concerning increase in syphilis among women over the past two years. This has been accompanied by a rise in congenital syphilis cases from 2012 to 2014. In 2014, the majority of female early syphilis cases and congenital syphilis cases in California were reported in the Central Valley and Los Angeles County. Most women who gave birth to babies with congenital syphilis received prenatal care late in pregnancy or not at all.

This increase in numbers of congenital syphilis cases in California is an important public health problem requiring immediate attention from medical providers caring for pregnant women and their reproductive age.

What is Congenital Syphilis?

Congenital syphilis occurs when syphilis is transmitted from an infected mother to her fetus during pregnancy. It is a potentially devastating disease that can cause severe illness in babies including premature birth, low birth weight, birth defects, blindness, and hearing loss. It can also lead to stillbirth and infant death.

Congenital Syphilis Can Be Prevented!

Congenital syphilis can be prevented with early detection and timely and effective treatment of syphilis in pregnant women and women who could become pregnant. Preconception and interconception care should include screening for HIV and sexually transmitted diseases (STDs), including syphilis, in women at risk, in addition to access to highly effective contraception.

Prenatal Screening: It’s the Law!

All pregnant women should receive routine prenatal care which includes syphilis testing. In California, it is required by law that pregnant women get tested for syphilis at their first prenatal visit.

Syphilis testing should be repeated during the third trimester (28-32 weeks gestational age) and at delivery in women who are at high risk for syphilis or live in areas with high rates of syphilis.

Common Mistakes

- Not reporting syphilis cases to local health departments within 24 hours.
- Not strictly adhering to treatment guidelines for pregnant women with syphilis.
- Not properly conducting routine risk assessment throughout pregnancy to determine the need for additional testing.

Sickens Who Would Benefit from Additional Syphilis Testing in the Third Trimester (28-32 Weeks) and at Delivery Include Those Who:

- Have signs and symptoms of syphilis infection.
- Live in areas with high rates of syphilis, particularly among females.
- Receive late or limited prenatal care.
- Did not get tested in the first or second trimester.
- Have partners that may have other partners, or partners with male partners.
- Are involved in substance use or exchange sex for money, housing, or other resources.

Diagnosing Syphilis

Sickens is diagnosed by reviewing patient history, taking a sexual risk assessment, physical exam, and blood tests. The diagnosis of syphilis requires interpretation of both treponemal and non-treponemal serology tests results. Guidance on interpreting syphilis test results, refer to the CDPH screening and diagnostic guide listed in the sources for health care providers section.

Treatment

Pregnant women should be treated as soon as possible. Treating a pregnant woman infected with syphilis also treats her.

Treatment for Early Syphilis (determined to be less than one year's duration):

- Benzathine penicillin G 2.4 million units by intramuscular injection in a single dose

Treatment for Late Latent Syphilis or Unknown Duration:

- Benzathine penicillin G 2.4 million units by intramuscular injection every 7 days for 3 weeks (2.4 million units total)

Penicillin is the only recommended therapy. Pregnant women with penicillin allergies should be referred to allergy specialists. There are no alternatives.

Pregnant women, benzathine penicillin doses for treatment of latent syphilis must be administered at 7 day intervals: if a dose is missed or late, the entire series must be restarted.

Partner Treatment and the Role of Local Health Departments

Provide sex with an untreated partner can cause re-infection. It is especially important to ensure that the partner(s) give treatment and to inform pregnant women about the risk to their infants if they have sex with an untreated sex partner. Local health departments are key collaborators in the prevention of congenital syphilis, and can assist with partner treatment.

Forma law requires that all syphilis infections be reported to the local health department where the patient resides within 24 hours of diagnosis. Contact information for local health department staff doing syphilis reporting can be found here: http://www.cdph.ca.gov/HealthInfo/Documents/CDH_CONTACT_INFO.doc

Sources for Health Care Providers

- Centers for Disease Control and Prevention: http://www.cdc.gov/stdsyphilis
- California Department of Public Health (CDPH): http://www.cdph.ca.gov/Programs/STDs/default.htm


Date: March 23, 2016
To: Medical Care Providers
From: Alvaro Garza, MD, MPH, Health Officer
      Julie Vaishampayan, MD, MPH, Assistant Health Officer

Health Alert

Ongoing Increase in Syphilis in Women Calls for Testing All Pregnant Women in the First & Third Trimester, and at Delivery

Situation: San Joaquin County is experiencing an increase in heterosexual transmission of syphilis, syphilis in women, and congenital syphilis. In 2015, 57% of syphilis was transmitted through heterosexual contact. Syphilis in women has increased dramatically and now accounts for 29% of all reported syphilis in the county. Six babies were reported with congenital syphilis in 2015 compared to two babies diagnosed with congenital syphilis in 2014. See Figure below.

The Health Officer is designating San Joaquin County as an area with high syphilis morbidity.

Such a designation calls for all clinicians to follow best practices and guidelines as established by the CDPH, CDC.
Efforts are needed:

- to create new tools;
- to detect and treat syphilis;
- increase testing;
- control the further spread of syphilis; and
- improve electronic medical records in order to improve patient outcomes.

https://www.cdc.gov/std/syphilis/resources.htm
Take-Home Points: Congenital Syphilis in California

• Female syphilis and congenital syphilis cases are increasing in California.
• Most congenital syphilis cases can and should be prevented.
• Confirm maternal syphilis testing at delivery; infants should not be discharged without this information.
• Ensure exposed infants are evaluated and treated according to guidelines; this is an opportunity to prevent morbidity associated with untreated syphilis.
• Follow infants until RPRs become nonreactive.
• Report to local health department within 24 hours.

Use stdccn.org for management questions.
Hepatitis C

• Rates of hepatitis C are increasing among women of childbearing age in California

• Test pregnant women for hepatitis C if at risk
  – HIV+; ever injected drugs, even once many years ago

• Vertical transmission risk of HCV: 5% HCV+; 15-20% if HIV+/HCV+

• Currently no prophylaxis to prevent MTCT
  – Treat BEFORE pregnancy; HCV treatment not currently recommended during pregnancy

• “Perinatal hepatitis C” (hepatitis C in an infant ages 2-36 months) reportable to public health as of January 2018

• Curative HCV direct-acting antiviral treatments FDA approved for persons 12 years of age and older

Sources: Society for Maternal-Fetal Medicine Consult Series #43, Hepatitis C in pregnancy: Screening, treatment, and management.; AASLD/IDSA www.hcvguidelines.org
Clinical Guidelines and Consultation

STD Clinical Consultation Network
Enter your consult online at:
www.stdccn.org

CDC STD Treatment Guidelines App
Available now, free

Thanks!

juliet.stoltey@cdph.ca.gov
510-620-3408