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Congenital Syphilis Symposium 2019

STD Program Staff

Welcome

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- Introductions
- Ground Rules
  - Be Respectful

Thank You!

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Planning Committee

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- Crystal Casas
  San Antonio Metro Health District- Field Operations Manager
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- Amanda Reich, MPH
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- Kacey Russell, MPH
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- Lupita Thornton, BS
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- Junda Woo, MD, MPH
  San Antonio Metro Health District- Medical Director

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Congenital Syphilis

Background

- Surveillance Definition (NNDSS/CSTE)
- Congenital Syphilis Clinical Evaluation and Treatment Scenarios
- Epidemiological Profile

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2018 Congenital Syphilis Definition

As determined by the Council of State and Territorial Epidemiologists (CSTE) and adopted by the Centers for Disease Control and Prevention (CDC)

Karen Arrowood, MPH

Background and rationale

- The congenital syphilis case definition was last updated in 2015.
- Periodic changes are needed to the syphilis case definition(s) to ensure consistent accurate reporting of cases
- Syphilis infections have continued to increase since their peak in 2000–2001.
  - Primary and secondary syphilis (the most infectious forms) had a rate of 2.1/100,000 (6,103 cases) in 2001
    - In 2018, this rate was 10.8/100,000 (35,063), the highest reported since 1994.
  - While cases continue to occur primarily among males with men having sex with men being the primary risk factor, cases among women have also increased.
  - Along with these dramatic increases in adult syphilis, congenital syphilis cases have also been increasing since 2012 with 1,306 cases reported in 2018 (33.1/100,000 live births).

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Criteria for case identification of congenital syphilis.

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Report to public health authorities any of the following laboratory test results:

- Demonstration of *Treponema pallidum* in clinical specimens by darkfield microscopy
- Demonstration of *T. pallidum* in late lesions by special stains
- Reactive polymerase chain reaction (PCR) or equivalent direct molecular tests
- Reactive nontreponemal serologic tests:
  - o Reactive Venereal Disease Research Laboratory [VDRL] serologic test
  - o Reactive rapid plasma reagin [RPR] serologic test
  - o Reactive results with equivalent serologic methods
- Reactive treponemal serologic tests:
  - o Reactive *T. pallidum* particle agglutination [TP-PA] serologic test
  - o Reactive treponemal enzyme immunoassay (EIA) serologic test
  - o Reactive treponemal chemiluminescence immunoassay (CIA) serologic test
  - o Reactive results with equivalent serologic methods
- Reactive Venereal Disease Research Laboratory [VDRL] in a specimen of cerebrospinal fluid

In addition, other laboratory test results associated with congenital syphilis:

- Demonstration of *T. pallidum* in lesions, body fluids, or neonatal nasal discharge by darkfield microscopy
- Demonstration of *T. pallidum* by polymerase chain reaction (PCR) or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material
- Demonstration of *T. pallidum* by immunohistochemistry (IHC), or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material

Criteria for case identification of congenital syphilis

Clinical findings associated with congenital syphilis:

- Evidence of congenital syphilis on physical examination
- Evidence of congenital syphilis on radiographs of long bones

Report to public health authorities any of the following epidemiologic risk factors:

Any case of congenital syphilis, an infant whose mother had untreated or inadequately treated syphilis at delivery, regardless of signs in the infant.

Report any death certificate that lists syphilis as a cause of death or a significant condition contributing to death.

Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery

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Congenital Syphilis Case definition

Clinical description:

A condition caused by infection in utero with *Treponema pallidum*.

A wide spectrum of severity exists, from inapparent infection to severe cases that are clinically apparent at birth.

An infant or child (aged less than 2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice (nonviral hepatitis), pseudoparalysis, anemia, or edema (nephrotic syndrome and/or malnutrition).

An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).

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Congenital Syphilis Case definition

Laboratory criteria for diagnosis (Confirmed Case)

Demonstration of *Treponema pallidum* by:

- Darkfield microscopy of lesions, body fluids, or neonatal nasal discharge, or
- Polymerase chain reaction (PCR) or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material, or
- Immunohistochemistry (IHC), or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material.

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Congenital Syphilis Case Definition

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Probable Case: a condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, **OR** an infant or child who has a reactive non-treponemal test for syphilis (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], **OR** equivalent serologic methods) **AND** any one of the following:

- Any evidence of congenital syphilis on physical examination (see Clinical description)
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory test (VDRL) test
- In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell, WBC) count or protein (without other cause):
    - Suggested parameters for abnormal CSF WBC and protein values:
        - During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal.
        - After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl, regardless of CSF serology.

The treating clinician should be consulted to interpret the CSF values for the specific patient.

Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery

Congenital Syphilis Case Definition

Syphilitic Stillbirth

A fetal death that occurs after a 20-week gestation or in which the fetus weighs greater than 500 g and the mother had untreated or inadequately treated* syphilis at delivery.

Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery

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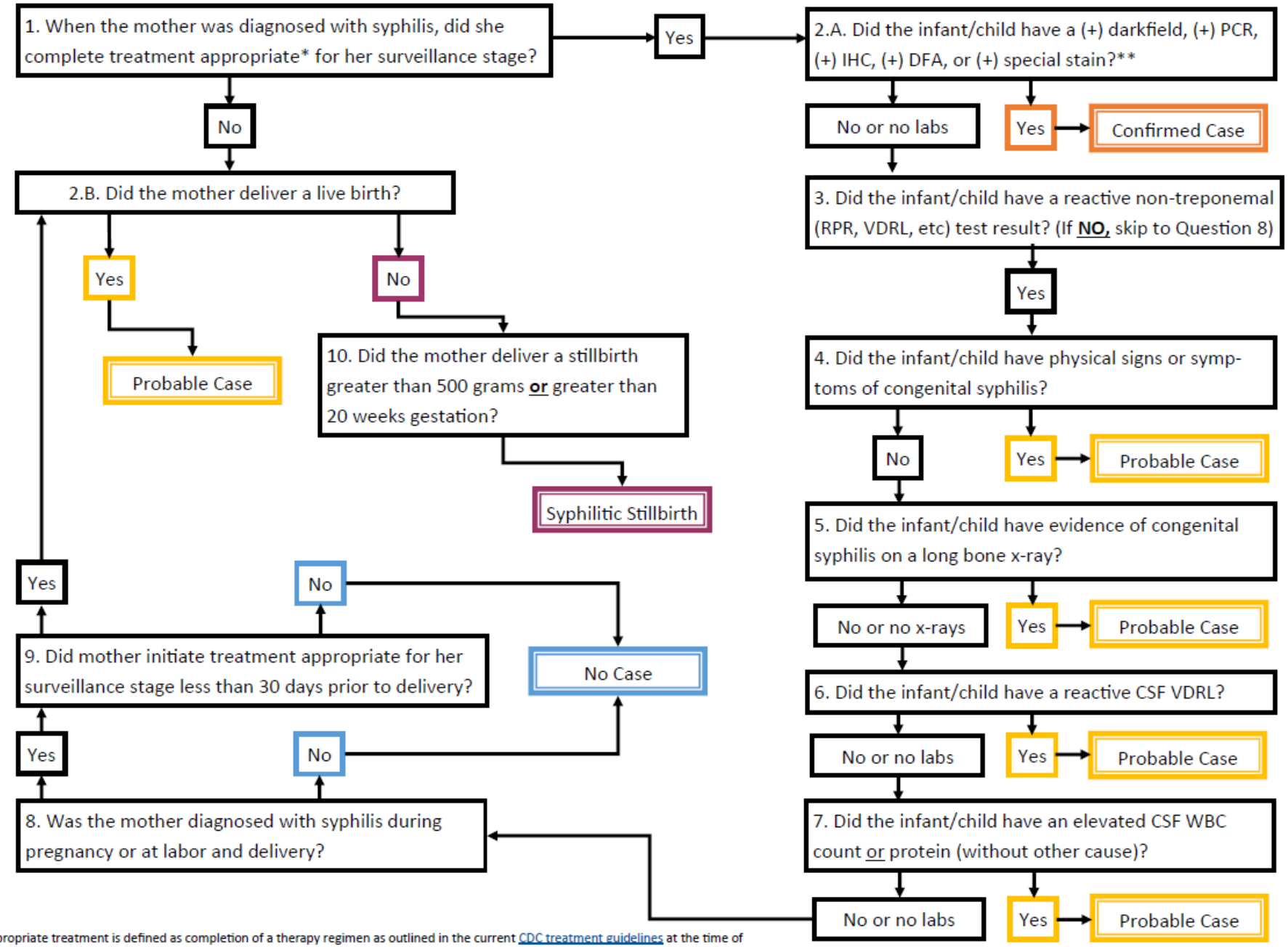
Congenital Syphilis Case Classification Flow Chart



*appropriate treatment is defined as completion of a therapy regimen as outlined in the current CDC treatment guidelines at the time of diagnosis or in the event of two dilution titer rise . Special consideration for treatment regimens for pregnant women can be found here.

Congenital versus Acquired Syphilis

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Congenital and acquired syphilis may be difficult to distinguish when a child is seropositive after infancy.

Signs of congenital syphilis may not be obvious, and stigmata may not yet have developed.

Abnormal values for CSF VDRL, WBC count, and protein may be found in either congenital or acquired syphilis. Findings on radiographs of long bones may help because radiographic changes in the metaphysis and epiphysis are considered classic signs of congenitally acquired syphilis.

While maternal antibodies can complicate interpretation of serologic tests in an infant, reactive tests past 18 months of age are considered to reflect the status of the child. The decision may ultimately be based on maternal history and clinical judgment. In a young child, the possibility of sexual abuse should be considered as a cause of acquired rather than congenital syphilis, depending on the clinical picture.

For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

Definition Changes from 2014 to 2015

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2014

Case Classification: Confirmed

- Demonstration of *T. pallidum* by darkfield microscopy, fluorescent antibody, or other specific stains in specimens from lesions, placenta, umbilical cord, or autopsy material.

2015

Case Classification: Confirmed

Additional Lab Criteria: Demonstration of *Treponema pallidum* by:

- Darkfield microscopy of lesions, body fluids, or neonatal nasal discharge, or
- Polymerase chain reaction (PCR) or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material, or
- Immunohistochemistry (IHC) or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material.

Definition Changes from 2014 to 2015

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2014

Case Classification: *Probable*

A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, or an infant or child who has a reactive treponemal test for syphilis and any one of the following:

- Any evidence of congenital syphilis on physical examination
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory (VDRL)
- An elevated CSF cell count or protein (without other cause)
- A reactive fluorescent treponemal antibody absorbed--19S-IgM antibody test or IgM enzyme-linked immunosorbent assay

*Inadequate treatment consists of any non-penicillin therapy or penicillin given less than 30 days before delivery.

2015

Case Classification: *Probable*

A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, or an infant or child who has a reactive non-treponemal test for syphilis (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], or equivalent serologic methods) AND any one of the following:

- Any evidence of congenital syphilis on physical examination (see Clinical description)
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory test (VDRL) test
- In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell, WBC) count or protein (without other cause):
  - Suggested parameters for abnormal CSF WBC and protein values:
    1. During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal.
    2. After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl, regardless of CSF serology.

The treating clinician should be consulted to interpret the CSF values for the specific patient.

*Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.

Case Definition Modifications Recap

There were four changes to the Congenital Syphilis case definition in 2015:

1. Infant requirement of non-treponemal test instead of a treponemal test
2. Eliminated the FTA-19s-IgM test from the definition, as it was rarely performed
3. Included reference ranges for CSF White Blood Cell (WBC) counts
4. Clarified the definition of adequate maternal treatment, to be more inclusive of women who did not complete treatment for the surveillance stage of syphilis.

Texas received supplemental funding for enhanced congenital syphilis surveillance in 2017.

With that funding, Texas DSHS Central Office hired two additional positions to work with sites to improve reporting, complete vital statistics matching, conduct case reviews, and provide real-time quality assurance.

No changes were made to the case definition in 2018.

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Out of Jurisdiction Guidance: Reporting

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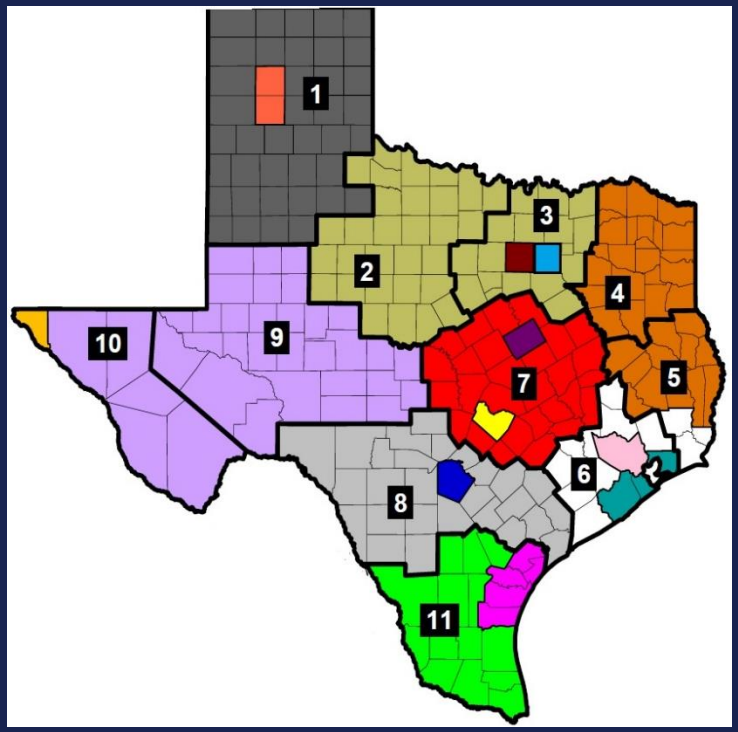
The jurisdiction where the infant is born ***regardless*** of mother's address is the jurisdiction responsible for completing the Congenital Syphilis Investigation.

- Example A: Mother's address is in Katy (Region 6/5S); she delivers in Houston. City of Houston Health Department is responsible for completing the Congenital Syphilis Investigation
- Example B: Mother's address is in Seguin (Region 8); she delivers in San Antonio. San Antonio Metro Health District is responsible for completing the Congenital Syphilis Investigation
- Example C: Mother's address is in Texarkana, AR; she delivers in Texarkana, TX. Region 4/5N is responsible for completing the Congenital Syphilis Investigation



Out of Jurisdiction Guidance: Collaborations

In the event that the infant is transferred to a hospital in another jurisdiction ***after*** delivery, the jurisdictions should collaborate to complete the Congenital Syphilis investigation.

Example: Infant is born at Parkland Hospital in Dallas, but transferred to Cooks Children's Hospital in Fort Worth. Both Dallas County Health & Human Services and Tarrant County Public Health Department review the infant's medical record at the hospital in their jurisdiction and ensure all information gathered from the chart reviews is entered into the Congenital Syphilis question package

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Out of Jurisdiction Guidance: Morbidity

The jurisdiction where mother resides ***regardless*** where she delivered is the jurisdiction where morbidity is assigned.

- Example A: Mother's address is Arlington; she delivers at Parkland Hospital in Dallas. Dallas County Health & Human Services will complete the Congenital Syphilis Investigation; the morbidity will be assigned to Tarrant County.
- Example B: Mother's address is Georgetown; she delivers in Austin. Austin Public Health is responsible for completing the Congenital Syphilis Investigation; the morbidity will be assigned to Williamson County (Region 7).
- Example C: Mother's address is Ciudad Juarez, MX; she delivers in El Paso. City of El Paso Department of Health will complete the Congenital Syphilis Investigation; the morbidity will be assigned to Mexico.

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Questions?

Thank you!

Karen Arrowood, MPH

CDC/NCHHSTP/DSTD/FSB: Public Health Advisor

DSHS: MIS and Surveillance Specialist

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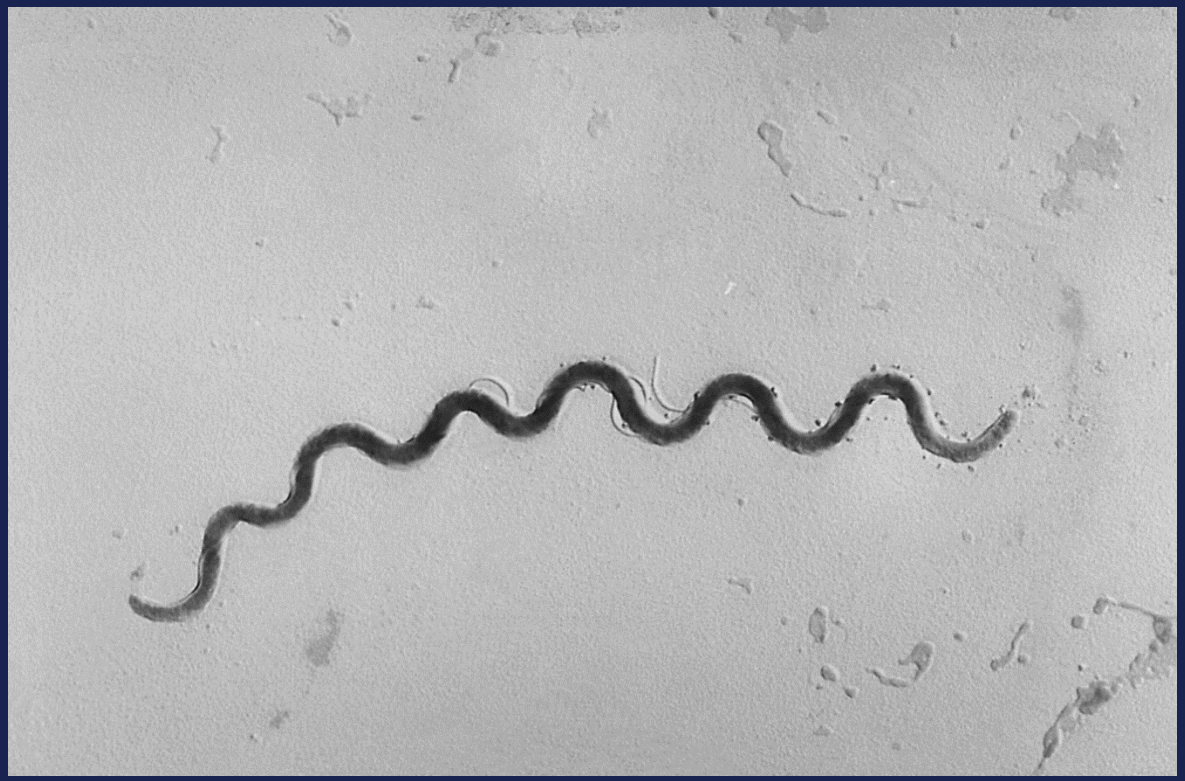
Congenital Syphilis Clinical Scenarios

Pam Mathie, MSN, RN
STD Nurse Consultant

Treponema pallidum bacterium

Causative Agent of Syphilis



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Congenital Syphilis (CS)

Evaluation & treatment of infants < 30 days old born to women with reactive syphilis serology during pregnancy

- All infants and mothers should have a serum RPR or VDRL titer drawn at delivery.
  - Texas Health & Safety Code SB 81.090-Testing for women at delivery
- Treponemal tests should not be performed on the newborn. Maternal antibodies are transferred to the infant via the placenta, and there is no test available to differentiate between maternal and infant antibodies.
- Pathologic examination of the placenta or umbilical cord (Immunohistochemistry (IHC)/special stains, T. pallidum PCR, or CLIA-validated test) should be strongly considered and performed if available.

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Clinical Scenario #1
Proven or Highly Probable CS

Infant Criteria

- Infant
  - CS findings on physical exam,

    OR
  - Infant serum quantitative non-treponemal titer four-fold (two dilutions) or higher than mother's titer,*

    OR
  - + darkfield or PCR/IHC/special stains of placenta/umbilical cord/lesions/body fluid

Yes to Any Above → Proven or Highly Probable CS

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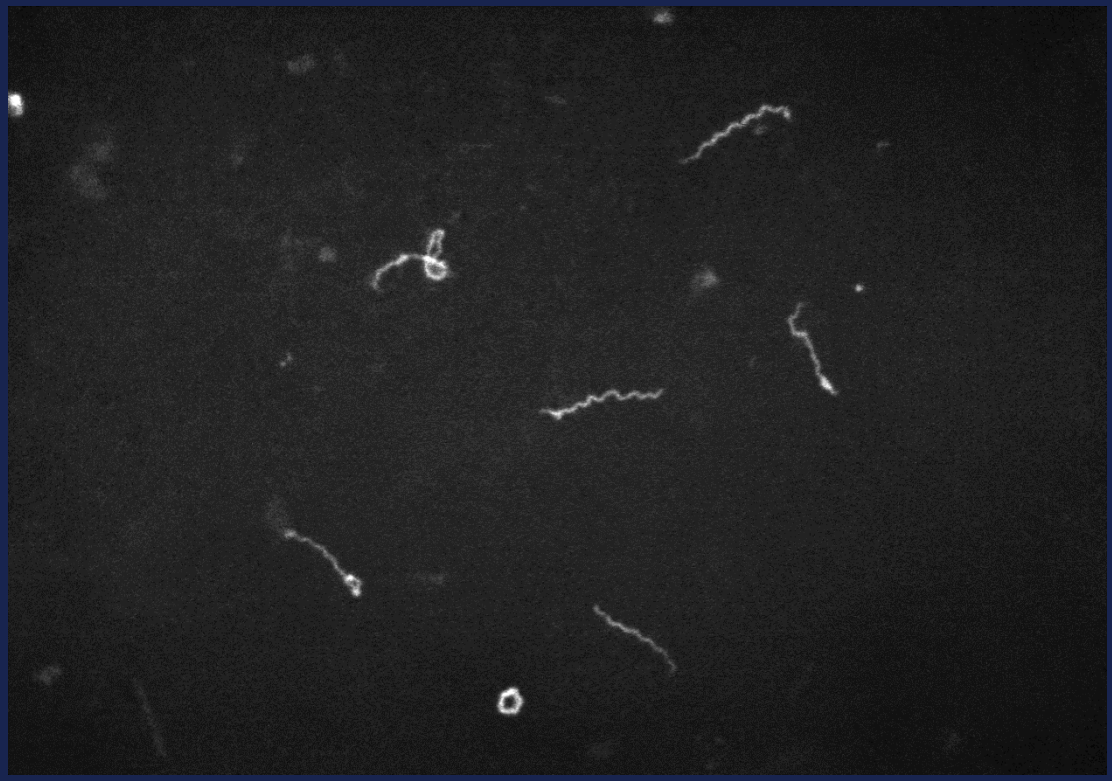
Clinical Scenario #1
Proven or Highly Probable CS

Darkfield



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Clinical Scenario #1
Proven or Highly Probable CS

Infant Signs/Symptoms

- Snuffles (copious nasal secretions)
- Rashes, mucocutaneous lesions
- Hepatosplenomegaly (liver/spleen enlargement), jaundice (yellow skin)
- Lymphadenopathy (swollen glands)
- Abnormal neurological signs, pseudoparalysis

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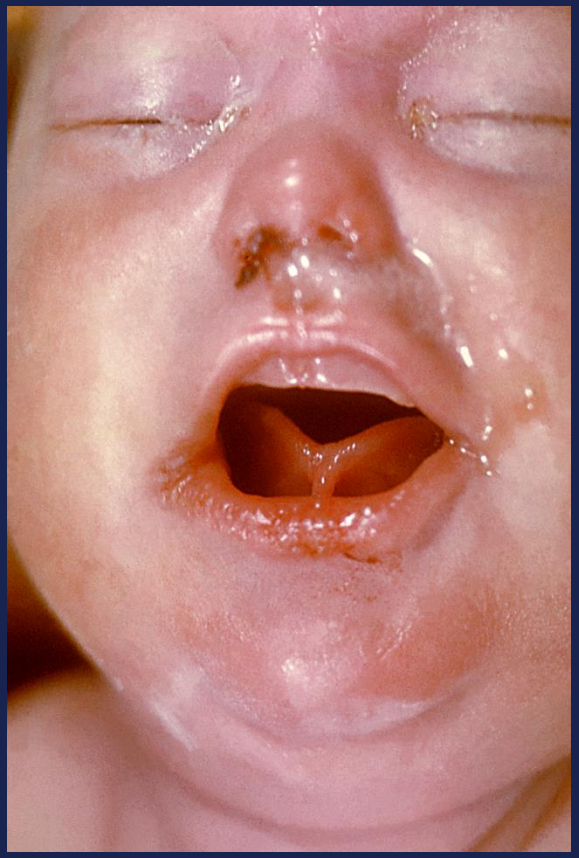
Clinical Scenario #1
Proven or Highly Probable CS

Snuffles



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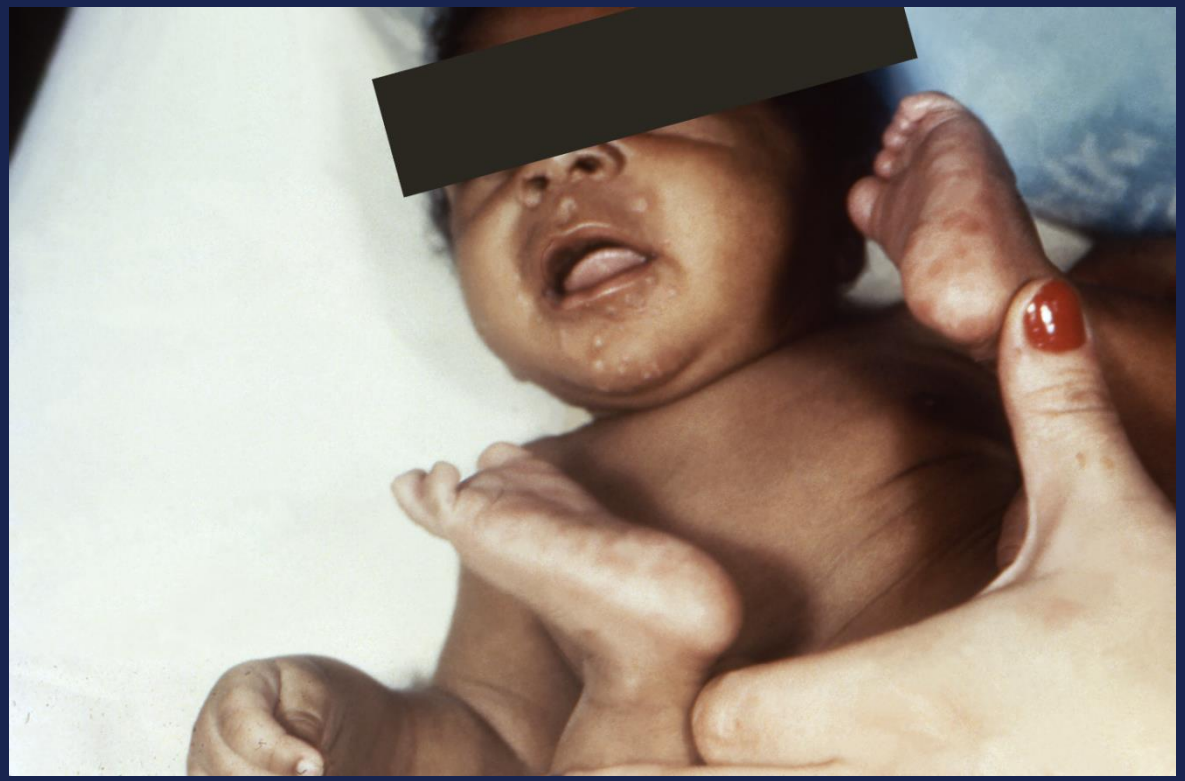
Clinical Scenario #1
Proven or Highly Probable CS

Rashes on face and feet



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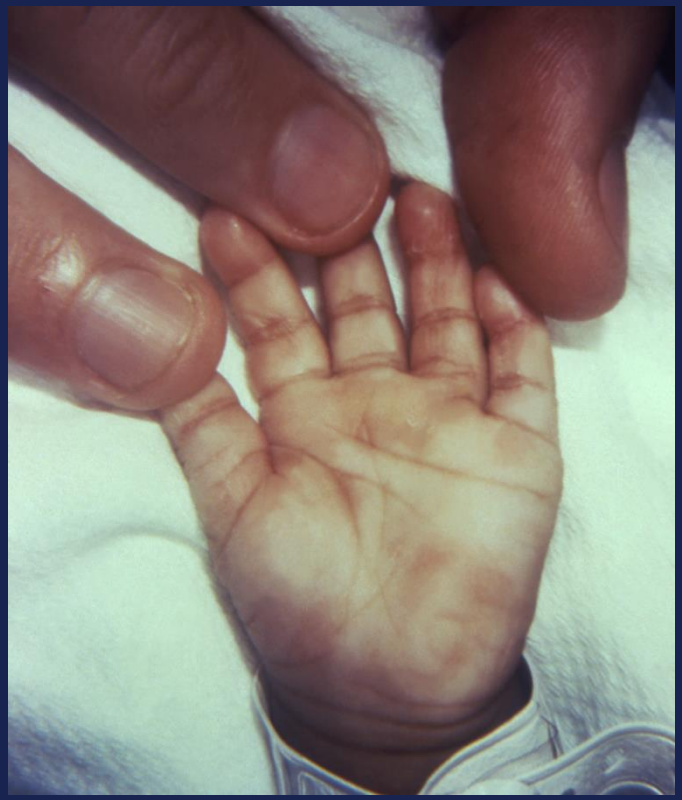
Clinical Scenario #1
Proven or Highly Probable CS

Palmar rash



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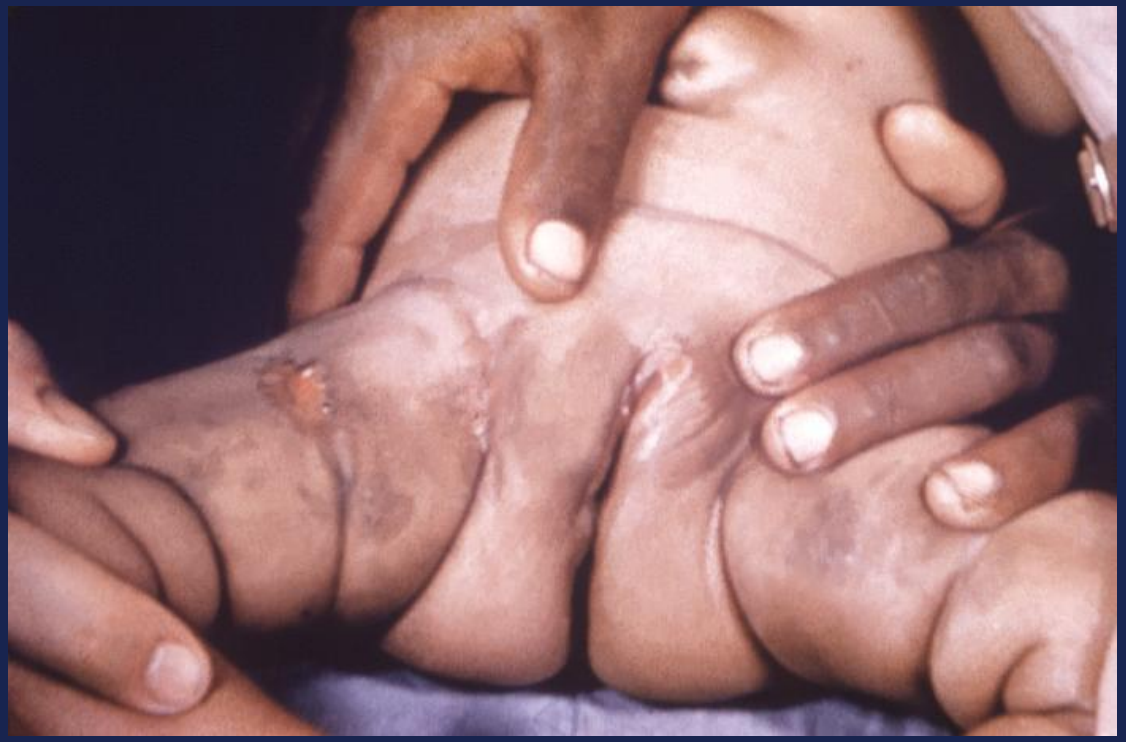
Clinical Scenario #1
Proven or Highly Probable CS

Cutaneous lesion



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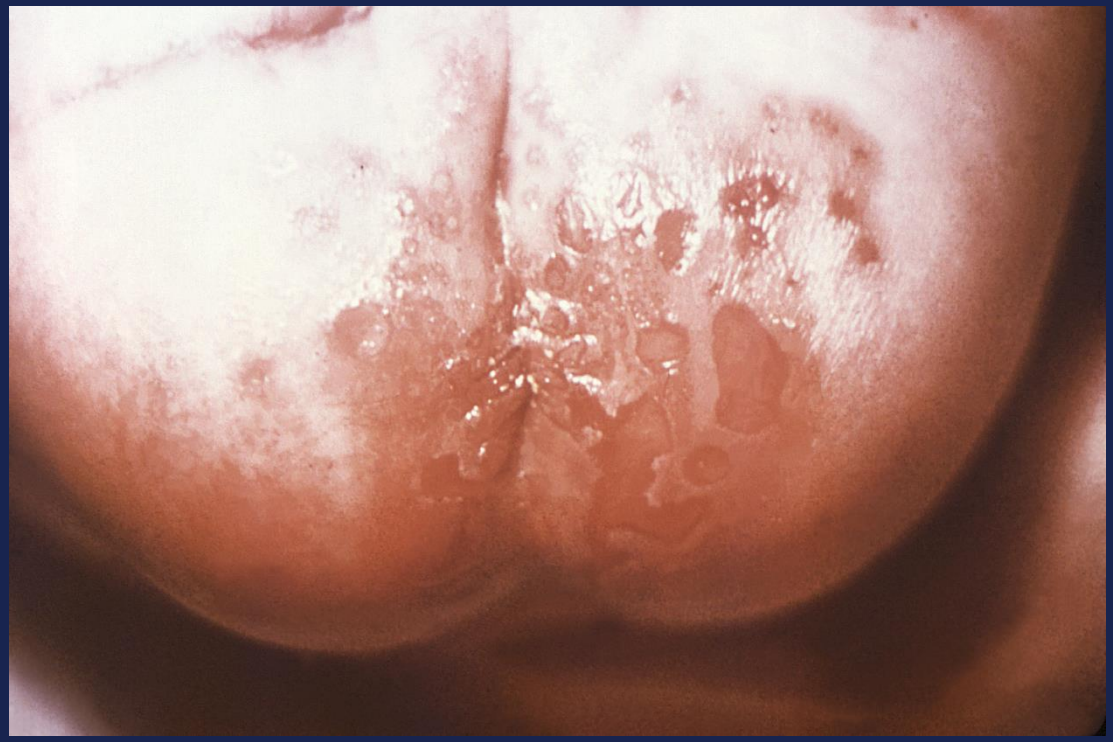
Clinical Scenario #1
Proven or Highly Probable CS

Eroded early syphilids



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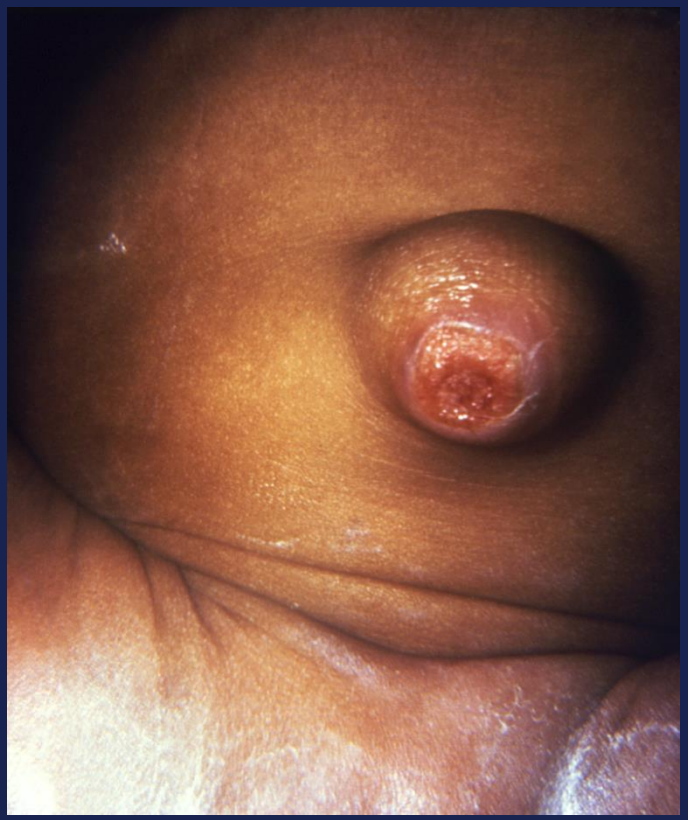
Clinical Scenario #1
Proven or Highly Probable CS

Umbilical lesion



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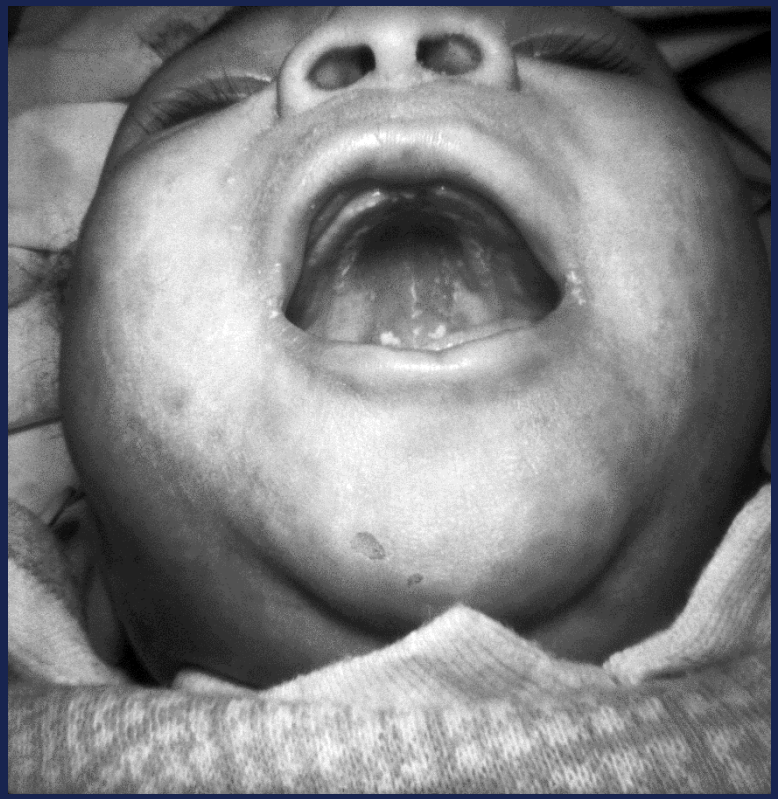
Clinical Scenario #1
Proven or Highly Probable CS

Oral mucous patches & facial rash



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Clinical Scenario #1
Proven or Highly Probable CS

Infant Evaluation Recommended:

- CSF (cerebrospinal fluid) analysis (VDRL, cell count, protein)
- CBC (complete blood count with differential and platelet count)
- Other tests as clinically indicated

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Clinical Scenario #1
Proven or Highly Probable CS

Other Tests

- Long-bone radiographs (Wimberger sign)
- CXR (chest x-ray)-pneumonia
- CBCs and more specific blood work-Thrombocytopenia (low platelets), hemolytic anemia (red blood cells lysing)
- Liver function tests
- Neuroimaging, ophthalmologic examination, and auditory brain stem response (ABR)

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Clinical Scenario #1
Proven or Highly Probable CS

Infant Treatment-10 day Regimen

- Aqueous crystalline penicillin G 50,000 units/kg/dose IV every 12 hours for first 7 days of life, then every 8 hours for a total of 10 days.

OR

- Procaine penicillin G 50,000 units/kg/dose IM in a single daily dose for 10 days.

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Clinical Scenario #2
Possible CS

Infant & Mother Criteria

- Infant
  - Normal physical exam

    AND
  - Serum quantitative nontreponemal serological titer equal to or less than four-fold (two dilutions) the maternal titer
- Mother
  - Not treated, inadequately treated, or treatment undocumented, OR
  - Treated with a non-benzathine penicillin G regimen during pregnancy, OR
  - Received treatment less than 4 weeks before delivery

Yes to Above -> Possible CS

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Clinical Scenario #2
Possible CS

Infant Evaluation Recommended*:

- CSF (cerebrospinal fluid) analysis (VDRL, cell count, protein)
- CBC (complete blood count with differential and platelet count)
- Long-bone radiographs
- Infant has no CS findings on exam to warrant additional tests.

* CDC STD Treatment Guidelines, 2015, state, "A complete evaluation is not necessary if 10 days of parenteral therapy is administered, although such evaluations may be useful."

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Clinical Scenario #2
Possible CS

Infant Treatment-Clinical Decision

- Aqueous crystalline penicillin G IV (or alternate IM regimen) for 10 days

  Required if any part of infant evaluation is abnormal or not performed, if the CSF is uninterpretable because of contamination with blood, OR follow-up uncertain

OR

- Benzathine penicillin G 50,000 units/kg/dose IM x 1

Only if the complete evaluation is normal AND follow-up is certain

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Clinical Example

- Mother diagnosed with syphilis during pregnancy without documentation of adequate treatment
- Infant's physical exam is normal and titers are less than four-fold (two-dilutions) mother's.
- CSF: VDRL-NR, WBC 25, protein 400 "bloody tap"
- CBC: WBC 25, RBC 5, H/H 16/48, platelets 125
- Long-bone radiographs: metaphyseal lucent bands

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Clinical Scenario #3
Less Likely CS

Infant & Mother Criteria

- Infant
  - Normal physical exam

    AND
  - Serum quantitative nontreponemal serological titer equal to or less than four-fold (two dilutions) the maternal titer

- Mother
  - Adequately treated with benzathine penicillin G appropriate for stage, greater than 4 weeks before delivery

    AND
  - No concern for reinfection or treatment failure

Yes to Above-> Less Likely CS

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Clinical Scenario #3
Less Likely CS

Infant Evaluation

No additional infant evaluation

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Clinical Scenario #3
Less Likely CS

Infant Treatment-Clinical Decision

- Recommended Treatment-Benzathine penicillin G 50,000 units/kg/dose IM x1

OR

- Alternative Approach-No treatment with close serologic follow-up every 2-3 months
  - Only for infants whose mother's titers decreased four-fold after appropriate therapy for early syphilis or remained stable for low-titer latent syphilis (e.g., VDRL <1:2 ; RPR <1:4).
  - **FOLLOW UP MUST BE CERTAIN!**

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Clinical Scenario #4
CS Unlikely

Infant & Mother Criteria

- Infant
  - Normal physical exam

    AND
  - Serum quantitative nontreponemal serological titer less than or equal to four-fold (two dilutions) the maternal titer
- Mother
  - Treatment adequate before pregnancy

    AND
  - Nontreponemal serological titer remained low and stable (i.e. serofast) before and during pregnancy and at delivery (VDRL <1:2; RPR,1:4)

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Clinical Scenario #4
CS Unlikely

Infant Evaluation

No additional infant evaluation

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Clinical Scenario #4
CS Unlikely

Infant Treatment-Clinical Decision

No treatment is required, but might be considered if follow up uncertain and the neonate has reactive nontreponemal test.

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Clinical Example

- Mother's RPR at first prenatal (12 weeks) 1:2; at 28 weeks 1:4; at delivery (40 weeks) 1:4
- Per OB chart mother "treated for syphilis in 2015 in New Mexico." "Serofast" documented at delivery.
- No documentation of treatment in medical record or surveillance databases.
- At delivery: Infant RPR 1:2
- Infant normal exam-"healthy newborn"

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CS Follow-up

Every 2-3 Months

- Infants in ALL clinical scenarios require close follow up and serologic testing, i.e. RPR, every 2-3 months (whether treatment given or not) until test becomes nonreactive
- Nontreponemal titer should decline by 3 months and be non-reactive by 6 months if treated adequately or uninfected (may take longer if treated after neonatal period).
- Neonates with a negative nontreponemal test at birth whose mothers were seroreactive at delivery should be retested at 3 months to rule out seronegative incubating CS.

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CS Follow-up

At 6-12 Months

- For infants not treated at birth because CS was considered less likely or unlikely, nontreponemal titers should decline by age 3 months and be non-reactive at 6 months. If still reactive at 6 months, the infant is likely infected and should be treated.
- For infants treated at birth, persistent non-treponemal test titers at 6-12 months should be re-evaluated with CSF examination and managed by an expert.
- Adequate treatment can prevent late CS manifestations in childhood and into adulthood.

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Late CS Manifestations (>age 2)

Early childhood into adulthood

- 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 (Hutchinson's teeth, saber shins)
- Neurologic abnormalities
- Gummas (granulomatous inflammatory response to spirochetes) in the skin or mucous membranes

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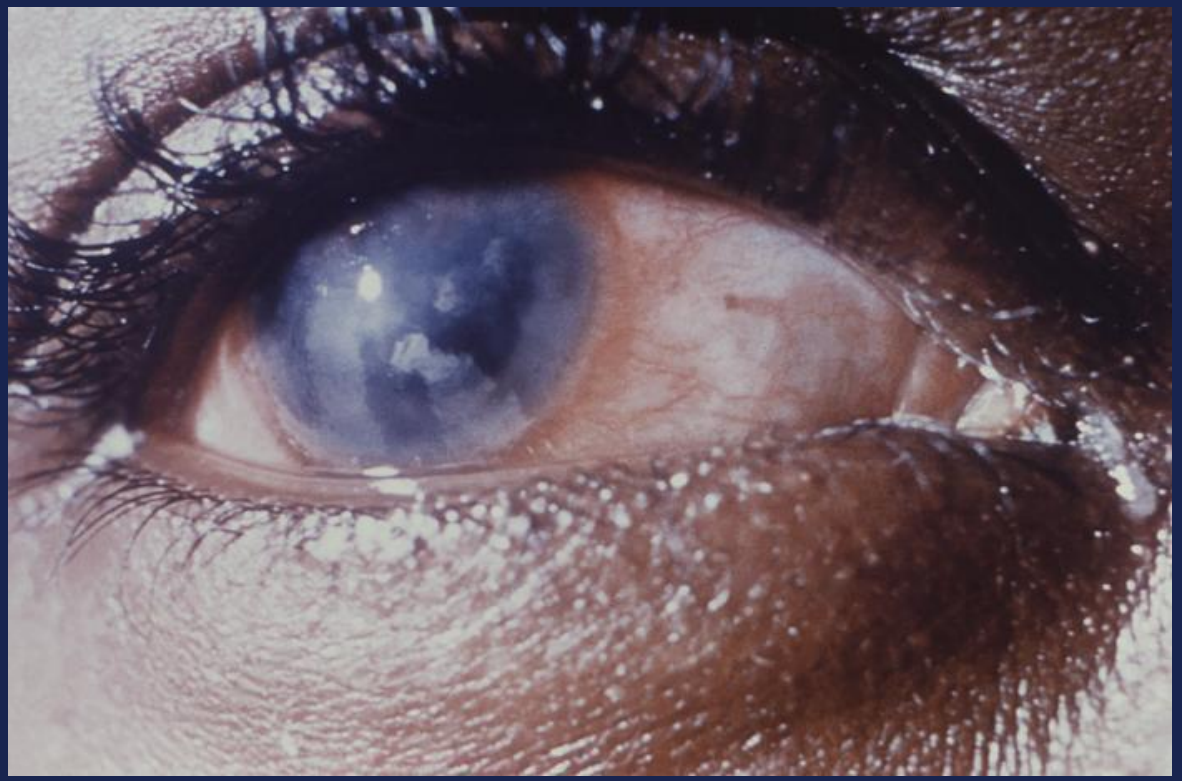
Late CS Manifestations

Interstitial corneal keratitis



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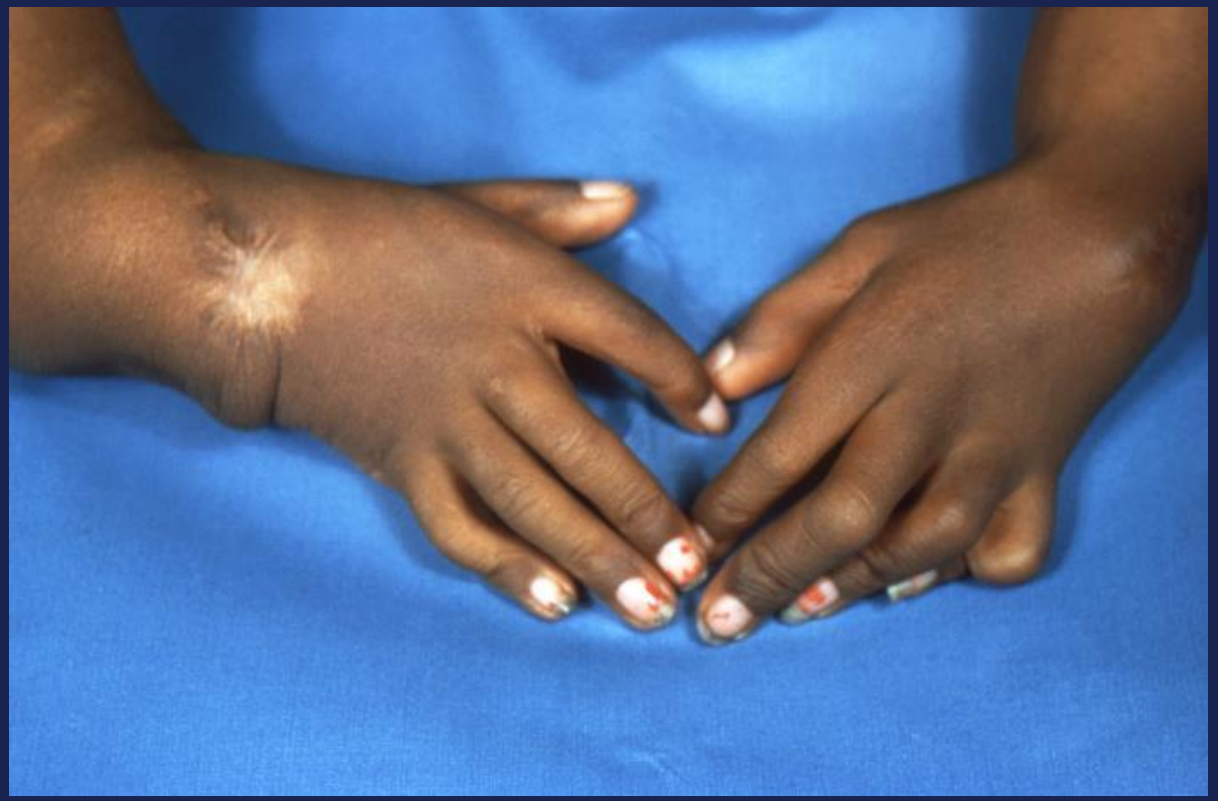
Late CS Manifestations

Syphilitic bone disease



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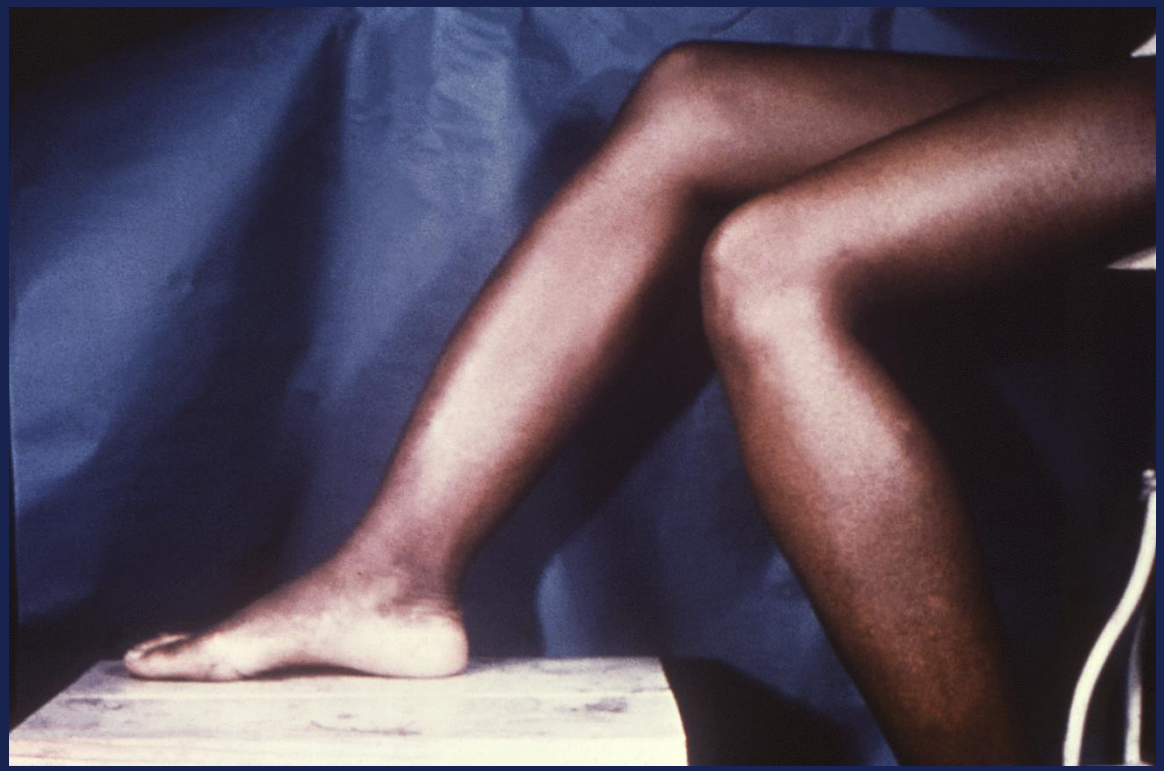
Late CS Manifestations

Saber shins



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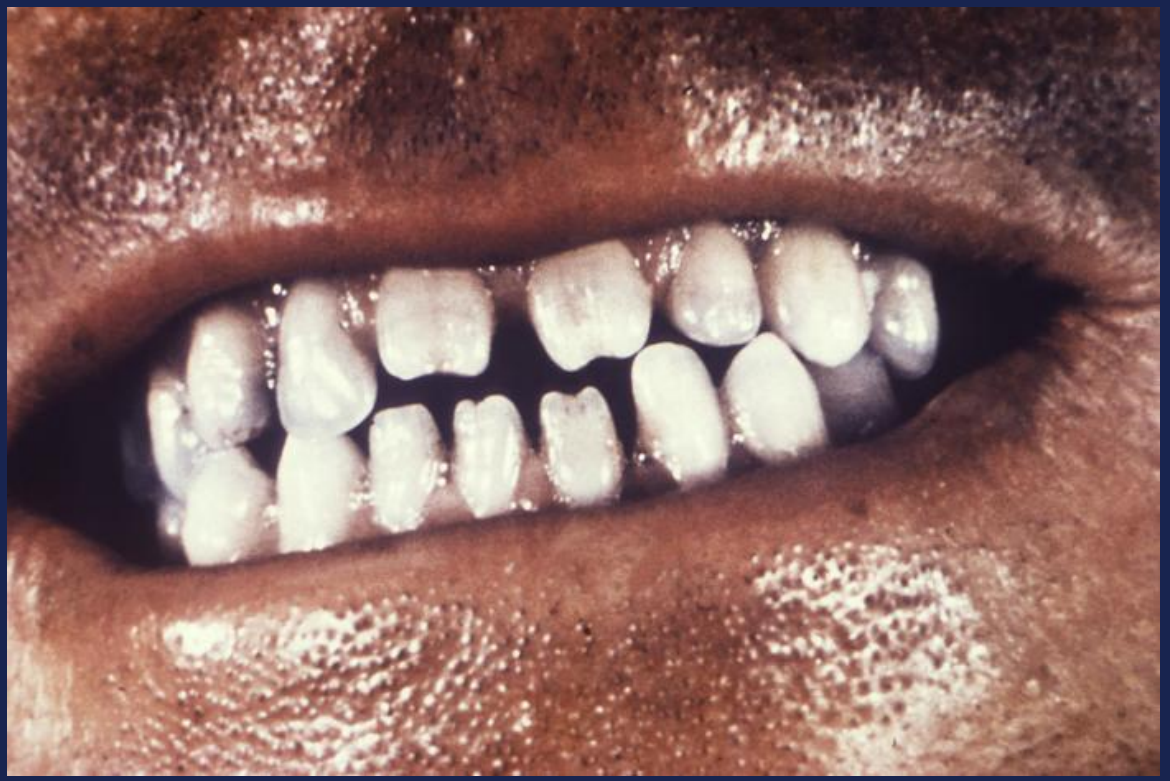
Late CS Manifestations

Hutchinson's teeth



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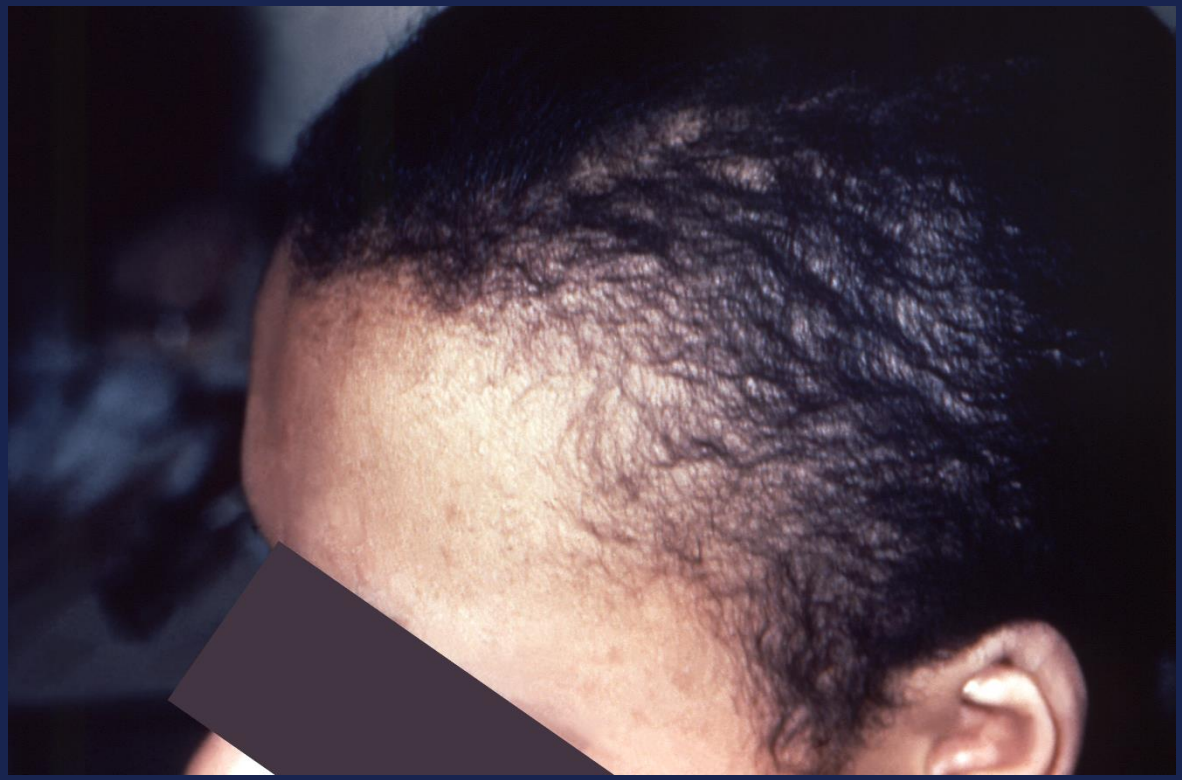
Late CS Manifestations

Frontal bossing



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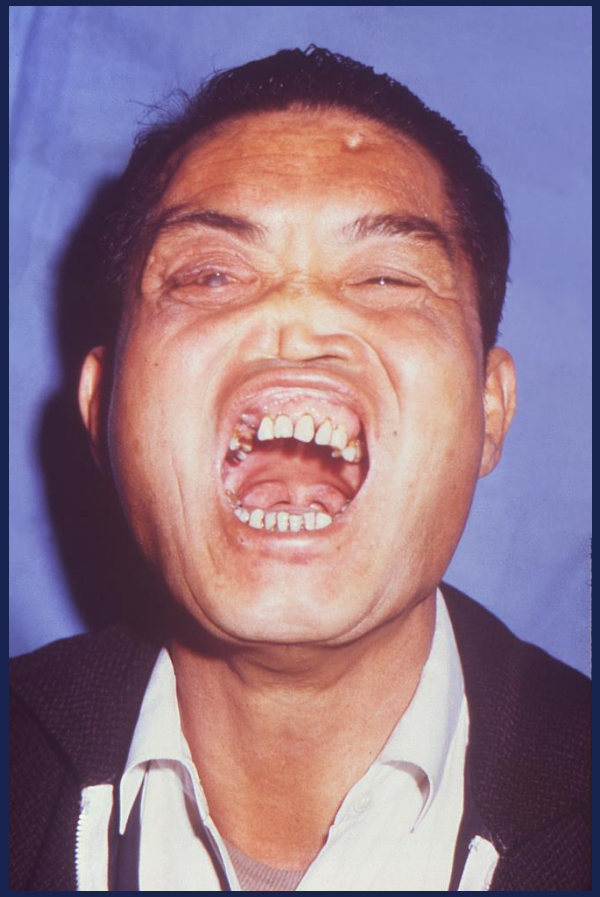
CS Manifestations

Frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, and cataract in right eye



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Infant CS Follow up

Discussion

- Case of "Less Likely CS" with no treatment and plan for follow up in 2 months for serology, but missed appointment.

  Mother moved to Dallas from San Antonio late in pregnancy. Physician who delivered infant in hospital documented mother "treated for latent syphilis during PNC." PNC record obtained by DIS documents BIC x1 administered. 755 with BIC x 1 in THISIS.

- What follow up care does the infant need?
- What are the next steps?

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CS Evaluation/Treatment/Follow up

Roles & Communication

- DIS
- Local Health Authority
- Hospitals
- Medical Providers
- Parents

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Infant CS Follow up

Program Expectations

- DIS
- FLS
- Local Health Authority

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Provider Outreach

Strategies

- Challenges
- Barriers
- Successes
- Solutions

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NYC Dept of Health & STD PTC Syphilis Monograph

https://www.dshs.texas.gov/hivstd/healthcare/treatment.shtm

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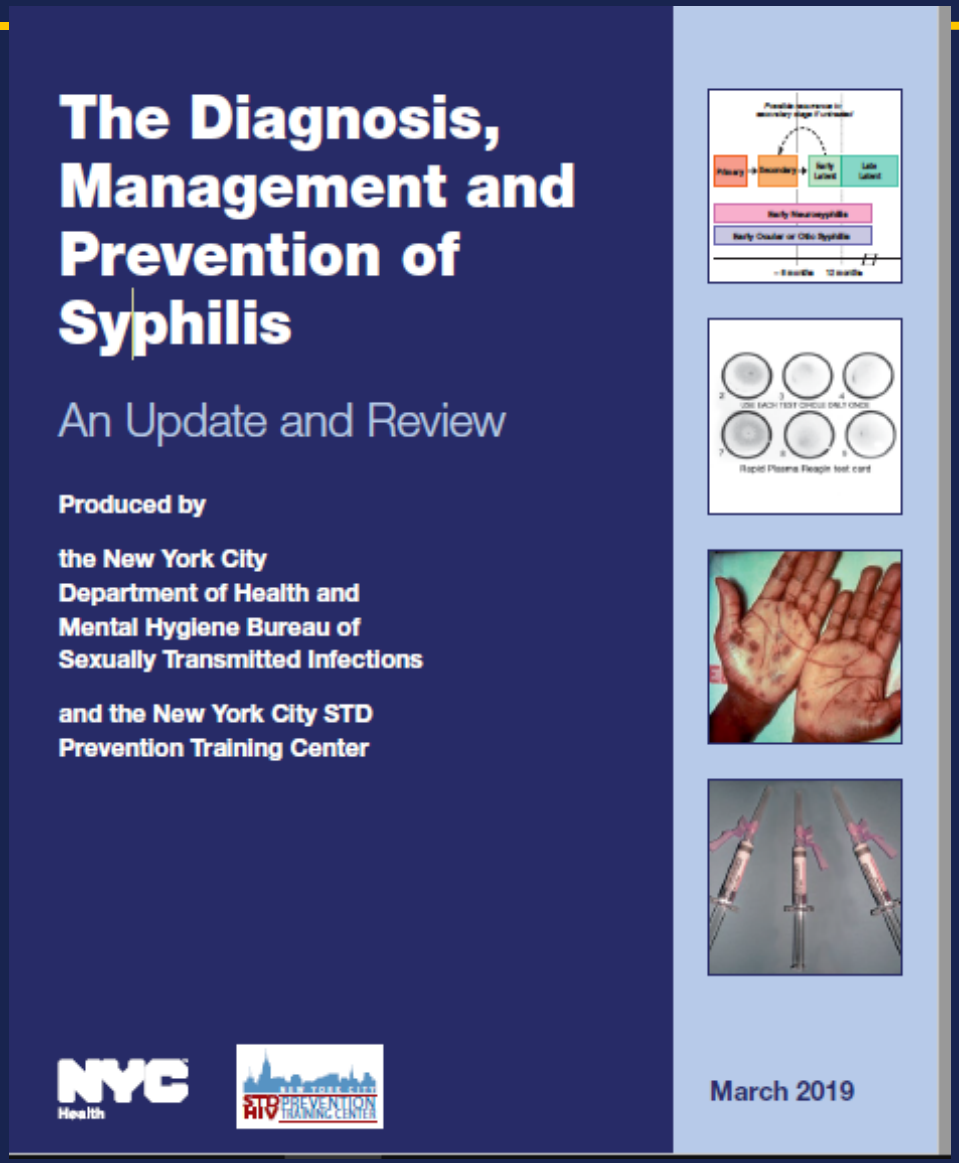

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Thank you!

Pam Mathie, MSN, RN

STD Nurse Consultant

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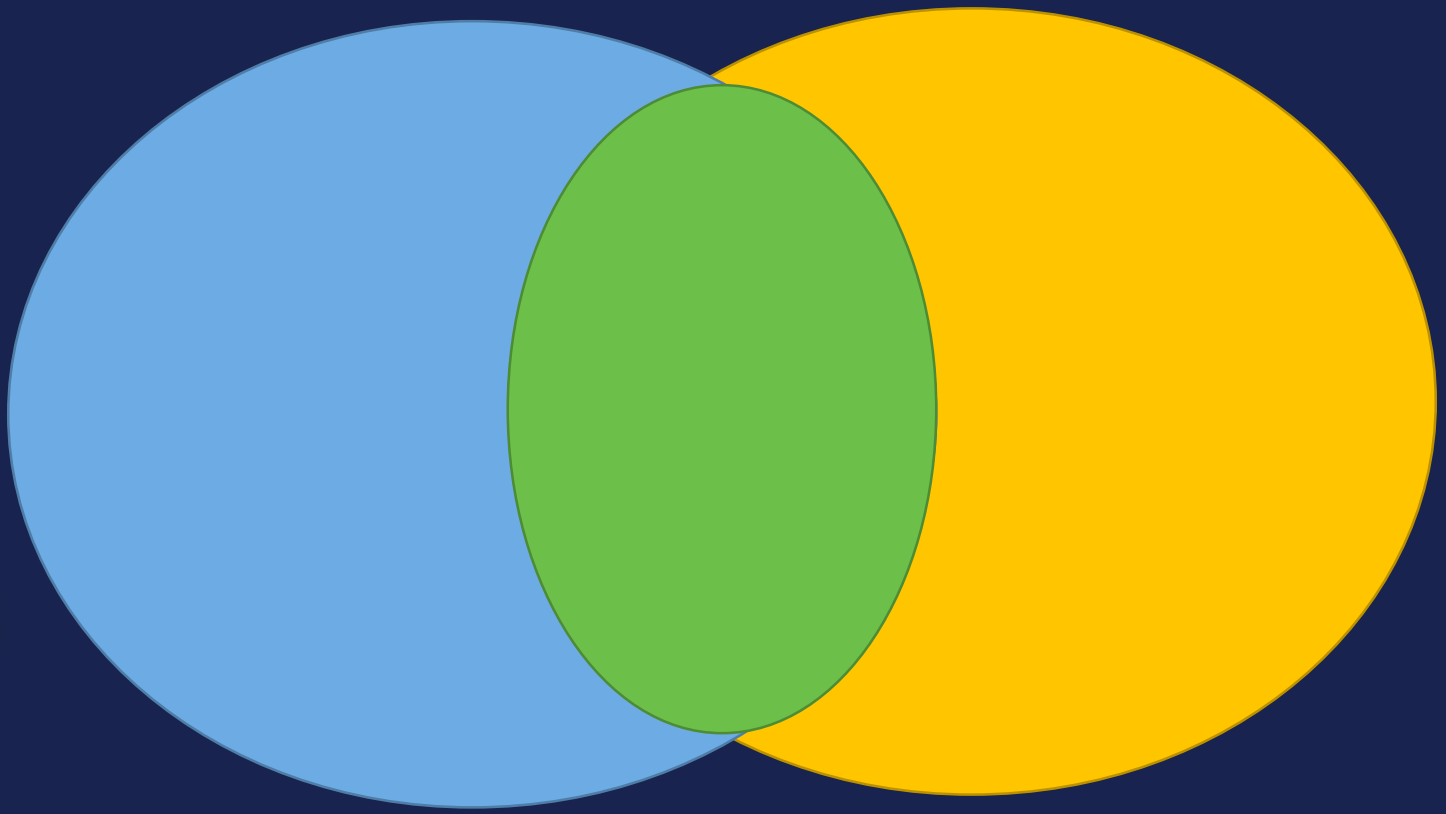
512-803-5523

Discussion Points

CSTE Definition and Clinical Scenarios



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Similarities

CSTE Definition and Clinical Scenarios

- Infant with a confirmatory lab: Confirmed Case
  Clinical Scenario #1 (Proven or Highly Probable)
- Infant with physical manifestations: Probable Case
  Clinical Scenario #1 (Proven or Highly Probable)
- Infant with abnormalities on long bone x-rays or CSF labs: Probable Case
  Clinical Scenario #2 (Possible CS)
- Mother with inadequately treated syphilis: Probable Case
  Clinical Scenario #2 (Possible CS)
- Mother with adequately treated syphilis: Not a Case
  Clinical Scenario #3 (Less Likely CS)
  Clinical Scenario #4 (CS Unlikely)

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Differences: CSTE & Clinical Scenarios

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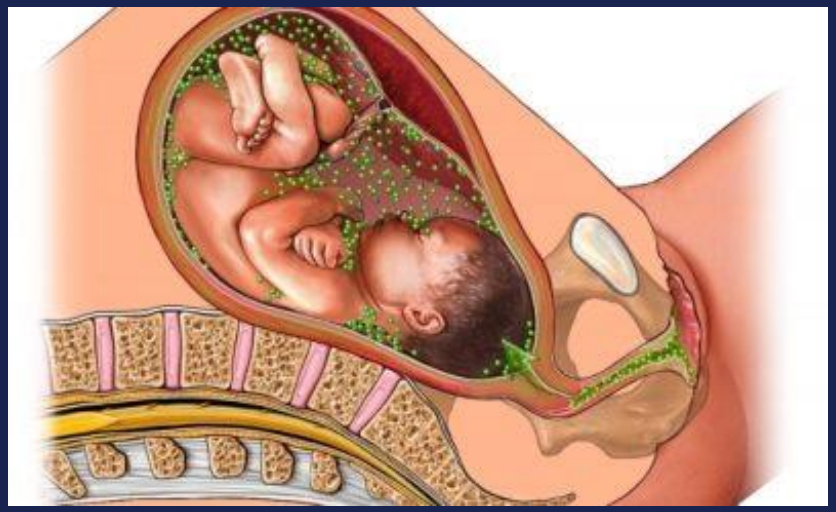
- Maternal titer and infant titer comparisons are **not** considered when making CSTE case classifications
  - Maternal and infant titer comparisons are *crucial* for Clinical Scenario Evaluations
- Infants must have a reactive non-treponemal test (RPR, VDRL) **and** an abnormality attributed to CS to be a probable case
  - A reactive infant RPR is **not** necessary for any Clinical Scenarios Evaluations or Treatment



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Data Profile

Kacey Russell, MPH
Epidemiologist, STD Prevention

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Break

15 Minutes

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Pregnancy & Women of Childbearing Age

Syphilis Follow-up

Pregnancy Ascertainment

- Pregnancy intendedness
- Appropriate referrals
  - Prenatal Care
  - Contraception or Pregnancy Prevention Options
- Syphilis reactors (& contacts) of Child-bearing Age
  - How to use the Congenital Syphilis Investigation Pending workflow
    - Lab reporting pregnancy status
- Follow-up on women with historical inadequate treatment

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Women with Syphilis

DSHS considers persons between 14-45 who have the ability to become pregnant to be of childbearing age.

Purpose:

- To ascertain pregnancy status
  - What medication is appropriate
  - Prevent congenital syphilis
  - Make appropriate referrals

Goals:

- Obtain LMP
- Ascertain number of children
  - Possible congenital syphilis exposures
- Current birth control method
- Date of last sexual contact

Questions to Ask

- How many children do you have?
  - Obtain age(s) of child(-ren)
  - Father(s) of child(-ren)
    - Potential P1/S2
- When was your last pregnancy?
  - Helps to obtain if the client was pregnant in the last year
    - Possible CS exposure, syphilitic stillbirth, or miscarriage
    - Can lead to obtaining a non-reactive test

Pregnancy Ascertainment

- When was your last normal menstrual period (LMP)?
  - LMP varies and clients may report variable timeframes
- What medications are you taking?
  - Helps ascertain contraception, incidental antibiotics, PrEP status, etc

One Key Question

One Key Question

Break it down into three questions

- Would you like to have any (more) children?
  - What are your plans regarding future pregnancies?
- Would you like to become pregnant in the next year?
  - When would you like to become pregnant again?
- How important is to you to prevent pregnancy until then?
  - What referrals do you need?

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DSHS Expectations

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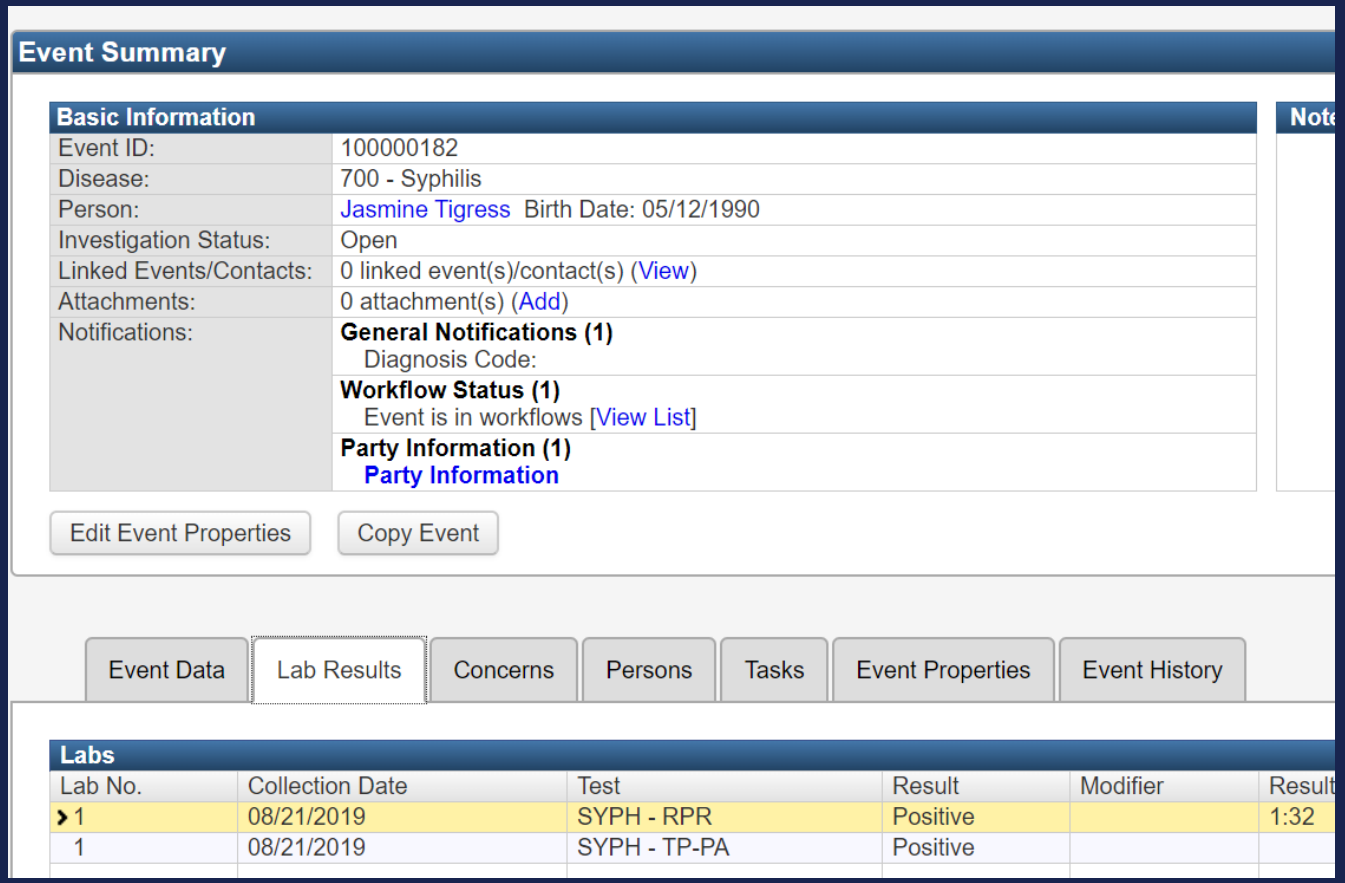
- ***90%*** of all syphilis reactors that are persons who can become pregnant (sex at birth = female) and are childbearing age, have a known pregnancy status
- ***80%*** of all syphilis contacts (partners, clusters, associates) are to have a documented pregnancy status when appropriate

THISIS: Pregnancy Status



Event Summary

Basic Information

Event ID:	100000182
Disease:	700 - Syphilis
Person:	Jasmine Tigress Birth Date: 05/12/1990
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**General Notifications (1)** Diagnosis Code:
	Workflow Status (1) Event is in workflows [View List]
	Party Information (1) Party Information

Edit Event Properties | Copy Event

Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result
1	08/21/2019	SYPH - RPR	Positive		1:32
1	08/21/2019	SYPH - TP-PA	Positive		

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Pregnancy and Syphilis

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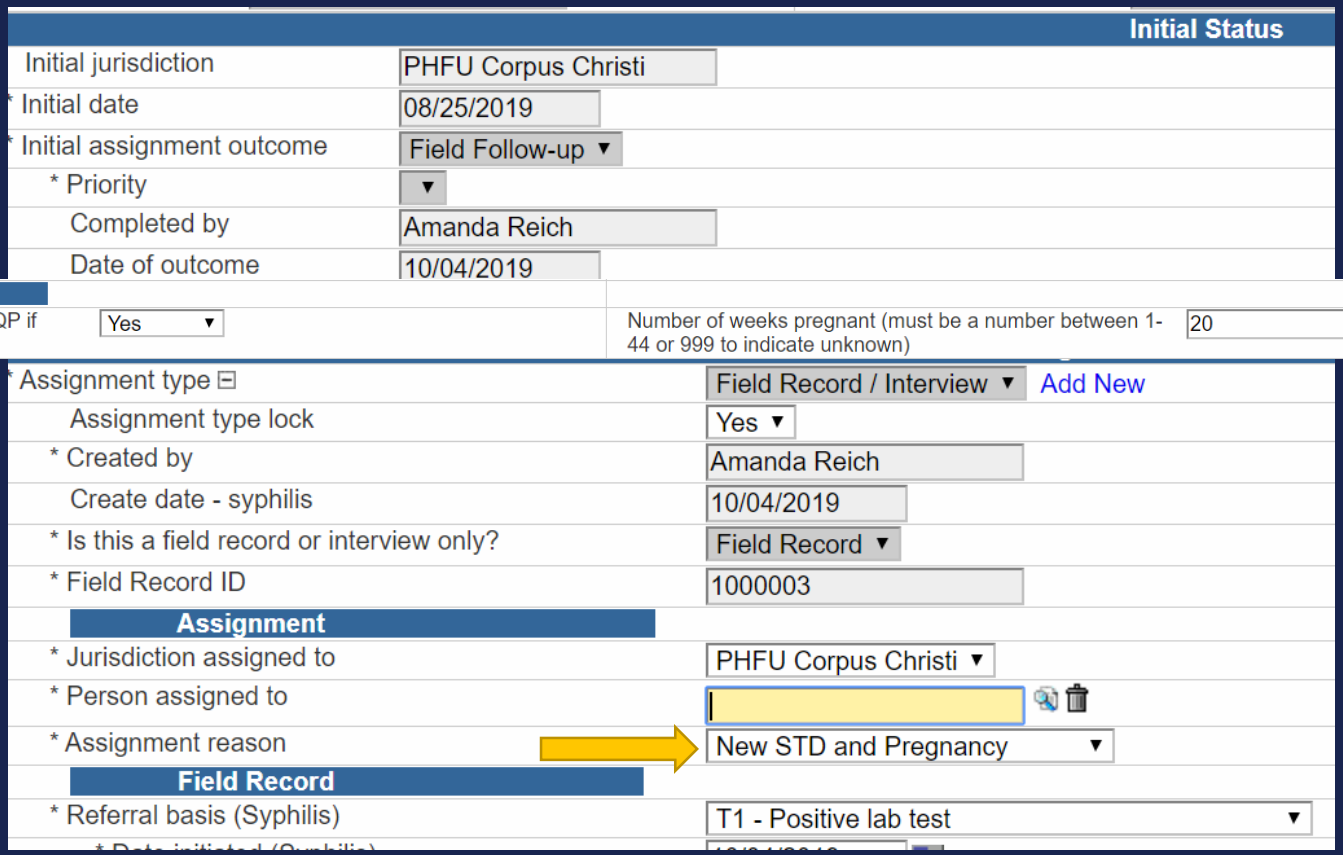
- When offering a pregnancy test to a woman who has tested positive for syphilis or is a contact for syphilis stress the increasing rates of congenital syphilis nationwide, especially in Texas.
- Use your congenital syphilis disease card as a motivator for pregnancy screening
- Explain complications of pregnancy due to syphilis and clinical manifestations of congenital syphilis
- Inform pregnant women who have tested positive for syphilis or are found to be pregnant that they need to inform their medical provider
- Follow-up with the provider to ensure correct treatment regimens are given
  - No doxycycline (harmful for the baby)
  - Bicillin x 3 for all late latent cases given approximately one week apart (CDC guidelines)

Creating the Field Record



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Pregnancy Ascertainment

Pregnancy Information	
* Was the patient pregnant at the time of this	Yes
Number of weeks pregnant at the time of this event?	
Currently in prenatal care?	
Congenital investigation status	Pending
Additional pregnancy in the last 12 months?	
New pregnancy after syphilis diagnosis	
* Indicates required field	

Pregnancy Information	
* Was the patient pregnant at the time of this event?	Yes
Number of weeks pregnant at the time o	20
Approximate due date	01/08/2020
Currently in prenatal care?	
Congenital investigation status	Pending
Additional pregnancy in the last 12 months?	
New pregnancy after syphilis diagnosis	
* Indicates required field	

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Referrals

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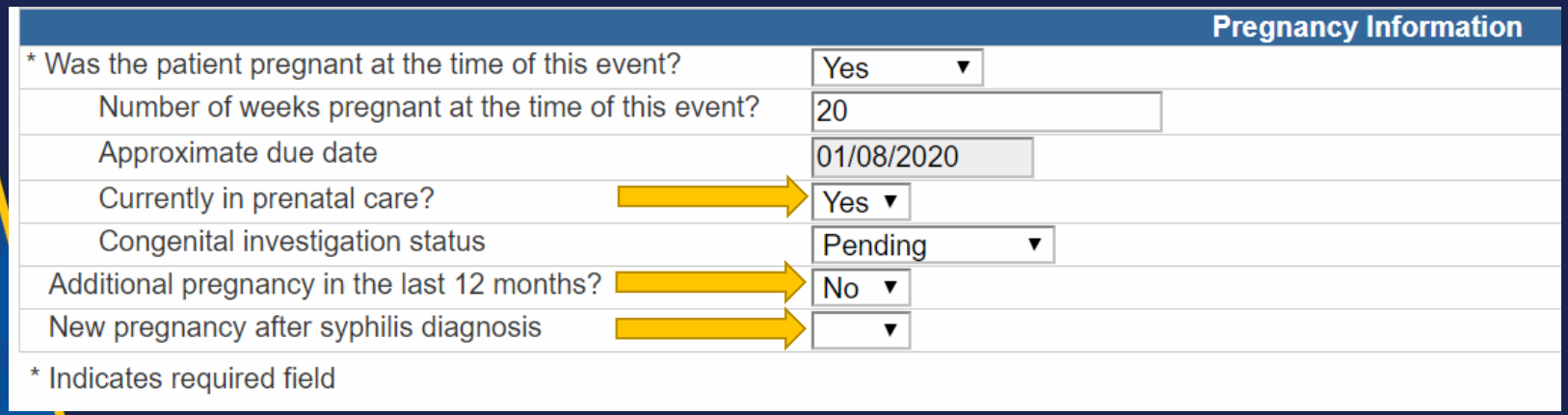
Discussion!

- What are some referral options for prenatal care in your jurisdiction?
- What are some referral options for clients if they express interest in not becoming pregnant in your jurisdiction?

Documentation



Pregnancy Information	
* Was the patient pregnant at the time of this event?	Yes
Number of weeks pregnant at the time of this event?	20
Approximate due date	01/08/2020
Currently in prenatal care?	Yes
Congenital investigation status	Pending
Additional pregnancy in the last 12 months?	No
New pregnancy after syphilis diagnosis	

* Indicates required field

- Add prenatal care status
- Document prior pregnancy
  - This will alert need for follow-up on possible CS exposures
- Leave "New pregnancy after syphilis diagnosis" blank

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Congenital Syphilis Investigation Pending Workflow

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Event Summary

Basic Information

Event ID:	100000182
Disease:	700 - Syphilis
Person:	Jasmine Tigress Birth Date: 05/12/1990
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**Concerns (1)** **Reporting: Facility type must be entered** **General Notifications (1)** Diagnosis Code: 755 - Syphilis, unknown duration or late **Workflow Status (1)** Ev [View List] **Party Information (1)** **Party Information**

Edit Event Properties | Copy Event

Congenital Syphilis Investigation Pending Workflow

100000182 - Jasmine Tigress - 700 - Syphilis

This event is currently in the following workflow queues:

Workflow Status

Workflow Queue	Category	Description	Last Update	Question Packages
CS Investigation Pending - Corpus Christi	STD FLS Activities	The patient has an identified pending congenital syphilis investigation	10/04/2019 14:42	Clinical
Cases with Open Concerns - STD	Case Specific Monitors	Cases with Open Concerns	10/04/2019 14:42	N/A
Open Assignments No User - Corpus Christi	STD FLS Activities	Open FRs, IXs, ReIXs, and CS Investigations with no user assigned. FLS need to review these open assignments and assign them to a worker.	10/04/2019 14:42	Case Assignment / Field Record
Open Assignments No User - Logic	STD FLS Activities	Open FRs, IXs, ReIXs, and CS Investigations with no user assigned. FLS need to review these open assignments and assign them to a worker.	10/04/2019 14:42	Case Assignment / Field Record
Open Field Records - Logic	STD DIS Activities	All Open Field Records (i.e. no disposition)	10/04/2019 14:42	Case Assignment / Field Record

Workflow Details - CS Investigation Pending - Corpus Christi

CS Investigation Pending - Corpus Christi (Last Update: 10/04/2019 14:42)

Event	Name	Create Date	APPROX_DUE	Diagnosis code
100000182- Clinical	Jasmine Tigress	10/04/2019	01/08/2020	755 - Syphilis, unknown duration or late

Removing an Event from the CSI Workflow

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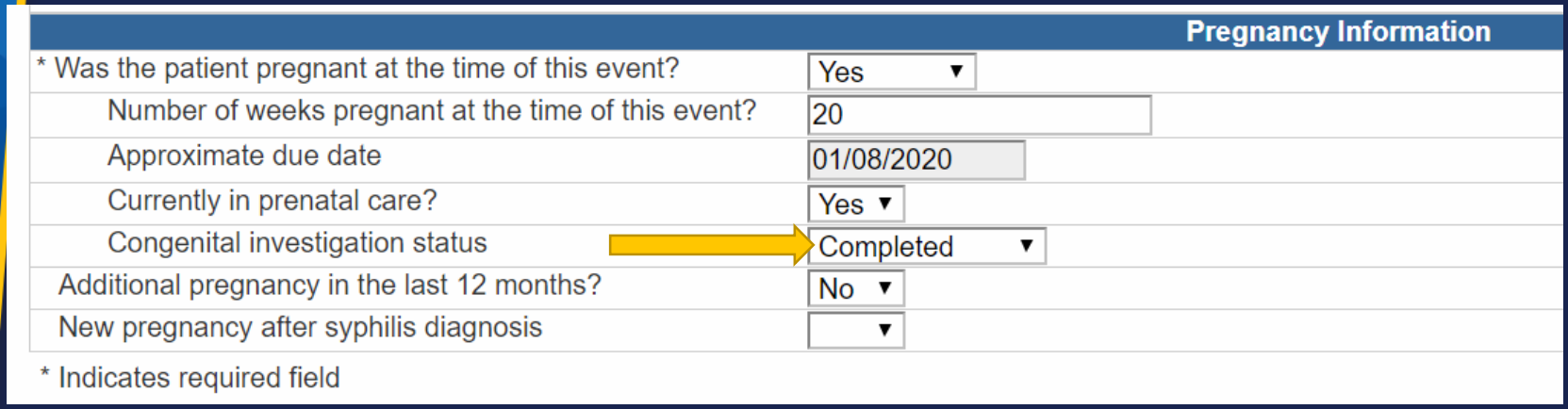

Pregnancy Information	
* Was the patient pregnant at the time of this event?	Yes
Number of weeks pregnant at the time of this event?	20
Approximate due date	01/08/2020
Currently in prenatal care?	Yes
Congenital investigation status	Completed
Additional pregnancy in the last 12 months?	No
New pregnancy after syphilis diagnosis	

* Indicates required field

- Once the investigation is completed, the event leaves the workflow

CS Investigation Pending - Corpus Christi	0 (0)

When not to Complete a Congenital Investigation

- Mother has delivered out of state
- Mother miscarried prior to 20 weeks' gestational age or < 500 grams
- Mother did not meet case criteria
- Mother was Biological False Positive

Pregnancy Information	
* Was the patient pregnant at the time of this event?	Yes
Number of weeks pregnant at the time of this event?	20
Approximate due date	01/08/2020
Currently in prenatal care?	Yes
Congenital investigation status	Not Completed
CO Approval	☐ Yes
Justification	Mother delivered out of state- Agrabah
Additional pregnancy in the last 12 months?	No
New pregnancy after syphilis diagnosis	

* Indicates required field

F4 Field Record: Treatment Restart

Follow-up on historical inadequate treatment

Purpose

- Reduce the number of women who deliver infants classified as congenital syphilis cases due to historical inadequate treatment
  - Example: Snow White is diagnosed with late latent syphilis in 2017, but only came in for one dose of Bicillin. New labs have recently imported from Charming Kingdom OBGYN/Prenatal Care.
    - What happens next?
    - How come?

Initiate a F4 Field Record

- Provider report of pregnancy, DIS report of pregnancy, lab report of pregnancy
  - Includes positive labs from delivery

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Lab Reporting of Pregnancy Status

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Patient Information	
First Name:	Jasmine
Last Name:	Agrabah
Date of Birth:	05/12/1990
Sex:	Female
Race:	Asian
Ethnicity:	Not Hispanic or Latino
Specimen Info	
Collection Date:	08/21/2019
Accession Number:	55555
Specimen Type:	Blood
Resulted Test	
Test:	SYPH - RPR
Result:	Positive
Rapid:	No
Result Value:	1:32
Resulted Test	
Test:	SYPH - TP-PA
Result:	Positive
Additional Clinical Information	
Additional Clinic	Encounter for Pregnancy; Initiation of Prenatal Ca
Comments	
Comments:	Prenatal Lab; Possible STD Exposure; Initiation of Prenatal Care; Medicaid Initiation; Encounter for Pregnancy

F4 Field Record

Follow-up:

High Priority

- Two field visits
  - am/pm
- Minimum two phone calls
  - am/pm
- Minimum two text messages
  - am/pm

Recommendation
Start with the reporting provider and discuss need for treatment

Dispostions

- 'N' – located the client and successfully initiated re-treatment
  - Remember to document new treatment
- 'H' – Unable to locate
  - Add notes to the event
- 'J' – Refusal
  - Use for both "hard" and "soft" refusals
    - Hard Refusal- a client explicitly refuses treatment
    - "Soft Refusal"- a client agrees to treatment, but repeatedly no shows appointments or is otherwise unable to be treated after all attempts by PHFU have been exhausted

F4 Field Record: Treatment Restart

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Record Searching:

- Documentation of inadequate treatment for syphilis case classification
  - Review case classification for need for additional treatment

Review historical titers:

- Any sustained two-dilution titer rises with the absence of treatment

Recommended Initiation *(Capacity Permitting)*

- Same initial criteria for all women of childbearing age, regardless of pregnancy status when new labs import
- Especially women who present to STD clinic and re-initiate treatment, but fail to show up for second appointment

Treatment Documentation

	Treatment
* Patient received treatment	Yes
* Specify medication name	Benzathine Peni Add New
* Dose	2.4 mu
* Frequency	x1 Only
* Date treated	09/01/2019

	Signs and Symptoms
* Is / was patient symptomatic?	No
	Treatment
* Patient received treatment	Yes
* Medication start date: **09/01/2019** Dosage: **2.4 mu** Duration: **x1**	Benzathine Penicillin G (Bicillin)
Medication start date: **09/08/2019** Dosage: **2.4 mu** Duration: **x1**	Benzathine Penicillin G (Bicillin)
Medication start date: **09/18/2019** Dosage: **2.4 mu** Duration: **x1**	Benzathine Penicillin G (Bicillin) Add New

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Provider Education

DSHS Public Health Region 11

Basic Information

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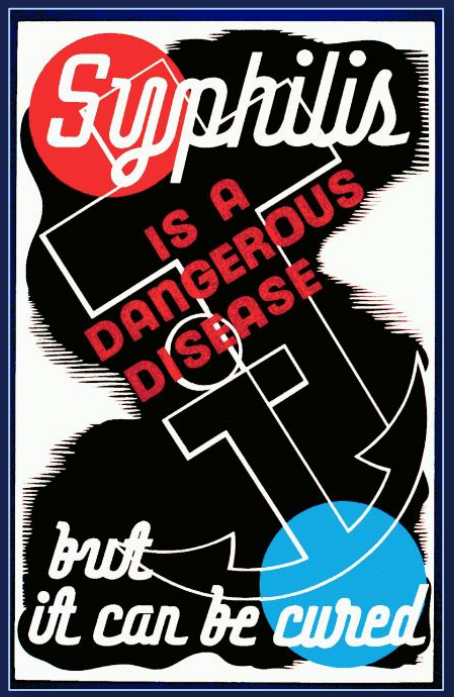
- Syphilis 101
- CDC Guidelines
- New algorithm
- Statistics
- Knowing your providers
- Hospital Infection Control



Syphilis 101

Review basic syphilis guidelines

- Meet with provider staff, usually:
  - Manager,
  - Medical assistant,
  - RN,
  - LVN,
  - lab staff, and
  - support staff.

So, next time you call the provider knows who is talking to them; try to get a contact person at each office.

- Always reference the Texas and CDC guidelines

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You are our EYES ….

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- We encourage and thank them for being the front line staff for direct patient care
- Remind them to always look for signs and symptoms
- If the patient does NOT disclose symptoms & you see them, please ASK!!! BE aware
- Show them pictures of: rash, chancre, palmar planter etc.

CDC guidelines

- Provided them with CDC most current link:
  https://www.cdc.gov/std/tg2015/
  Advise them of app you can download or obtain online
- Provide pregnancy guidelines for RPR testing, and treatment
  (Adequate treatment for diagnosis)

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New Algorithm

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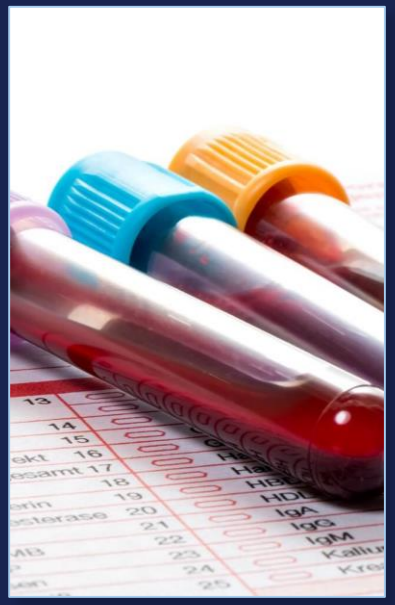
- Provide copy of the new algorithm
- The importance of ordering the correct test and reason why its important.
- RPR vs. VDRL, TPPA vs FTA-ABS, and IGG with reflex and confirmation.



Statistics

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- Always useful and they are very interested:

1. National Syphilis Rates
2. Texas Rates
3. Regional / Local Rates

Knowing your providers

Enables for interaction between regional/local staff and provider staff

- We encourage provider staff to contact the office for record searches or if a patient has signs/symptoms.
- We have THISIS
- All providers DO NOT have complete history or treatment.

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Medication

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- Provide medication on monthly basis
  - Azithromycin
  - Rocephin
  - Doxycycline
- Expediated Partner treatment
  - Provide meds
- Provide treatment for Syphilis reactors

Hospital Infection Control

- It is imperative to make contact with your local (APIC members)

  Association for Professional Infection Control & Epi Nurses

  - It is usually comprised of all local hospital infection control staff, nursing homes, & rehabilitation centers.
  - They have monthly meeting at which you can do provider education, updates and changes all at once.

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Hospital Infection Control

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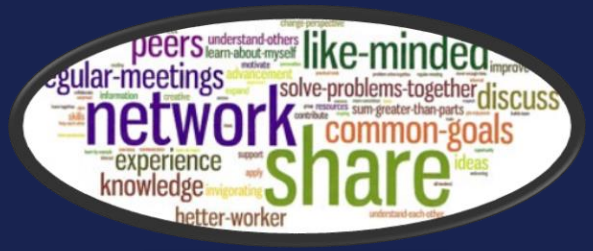
- They can help with medical records abstractions
- They can help with obtaining web portal access
- They can help with interactions with laboratory staff
- They can get all H & P for not only RPR but HIV.



Communication

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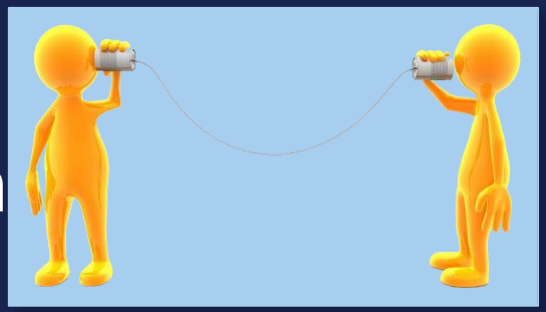
- It is very important to have open communication with all the providers and hospital infection control staff.
- It can take a long time to gain their trust, so don’t give up!



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Thank you

zulema.garcia@dshs.texas.gov

Dept of State Health Services Region 11

601 W. Sesame Drive

Harlingen, Texas 78550

956-444-3242

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Lunch

Please be back in 1 hour 30 min

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Medical Chart Abstractions

Completing a Congenital Syphilis Investigation

Beginning the Investigation

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How to Start?

- Laboratory Report
  - Maternal
  - Infant

Field Record

- T1- Reactor
- F1- Congenital Follow-up
- Congenital Syphilis Investigation Assignment

Next Steps:

- Contact the Hospital
- Obtain the Medical Chart
- Complete the Abstraction
- Complete the Congenital Syphilis Question Package (THISIS) & STD-126

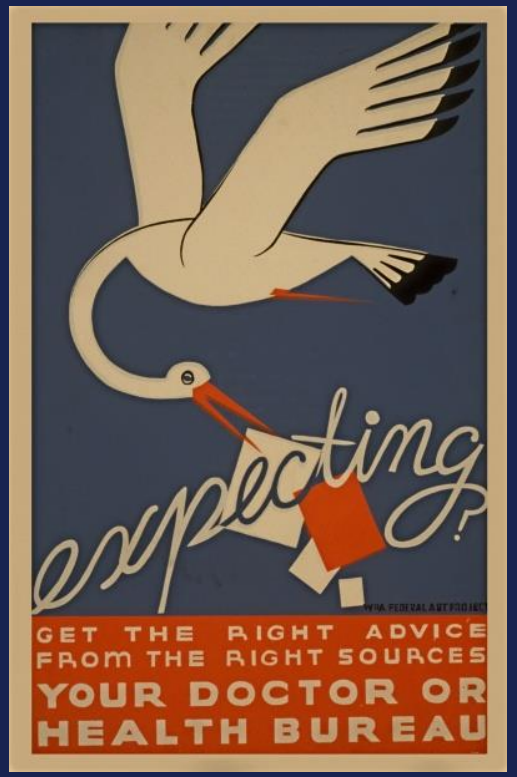
Field Records

TEXAS Health and Human Services

Texas Department of State Health Services

A Field record should be initiated for all children, regardless of whether or not they already have a CS report in the system.

- Reactor (T1) Field Records are to be initiated on all reactive syphilis labs on children 10 years of age and younger.
- Congenital Follow-up (F1) Field Records are to be initiated on all infants with negative labs, infants without labs born to woman with syphilis history, and any presumptive infants that a jurisdiction may have knowledge of, but have yet to receive report of
- "Congenital Investigation" Assignments are to be created for the infant at the same time a field record is initiated.



Next Steps

TEXAS Health and Human Services

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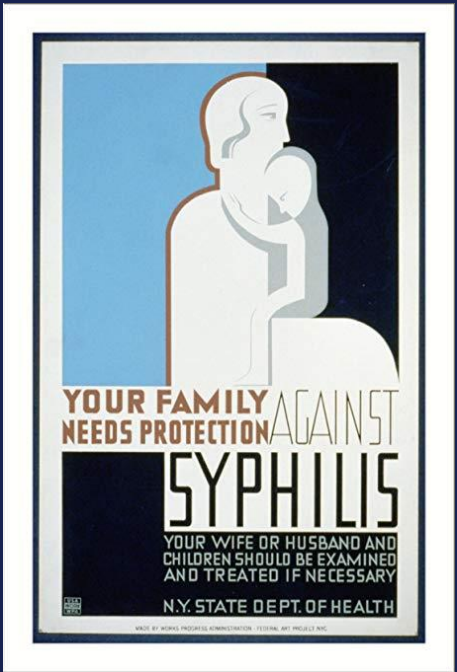

- Contact the facility of birth
  - Speak with Infection Preventionist
  - Possibly speak with the floor nurse
- Obtain and/or confirm infant & mother's
  - Lab Result(s)
  - Treatment(s)
  - Medical Record Numbers
  - Infant gestational age, gender, Birth weight
- Request Medical Record(s)

Closing a Perinatal Field Record

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Texas Department of State Health Services

Field Record Dispositions:

- ***'C'- Infected, brought to treatment***
  - Infant is a probable or confirmed case of congenital syphilis and was treated ***at or after*** the time the field record was initiated.
- ***'D'- Infected, not treated***
  - Infant is a probable or confirmed case of congenital syphilis and was ***not*** treated.
- ***'E'- Previously treated for this infection***
  - Infant is a probable or confirmed case of congenital syphilis and was treated ***before*** the time that the field record was initiated
- ***'F'- Uninfected***
  - Infant was not a case of congenital syphilis
- ***'X'- Deceased***
  - To be used for syphilitic stillbirths only

Closing the Congenital Investigation Assignment

TEXAS Health and Human Services
Texas Department of State Health Services

A Congenital Investigation Assignment is to be closed as the completion of the Congenital Syphilis Investigation:

- The Perinatal Field Record has been investigation and dispositioned
- All reported laboratory results have been documented appropriately
- All reported treatment(s) have been documented appropriately
- The Congenital Syphilis Question Package has been completed (yielding a case classification) **and** submitted to the supervisor via THISIS
  - The STD-126 is complete

Minimum Standards for Congenital Syphilis Investigations

- **85%** of perinatal syphilis field records (reactor and follow-up) are to be dispositioned in 7 days of initiation.
- **95%** of perinatal syphilis field records (reactor and follow-up) are dispositioned correctly.
- **90%** of "Congenital Investigation" Assignments are closed within 30 days following initiation.
- **95%** of Congenital Syphilis Investigation Reports are completed and submitted to DSHS Central Office Congenital Syphilis Staff (Congenital Syphilis Question Package Closed) within 30 days of notification to the Reporting Jurisdiction.

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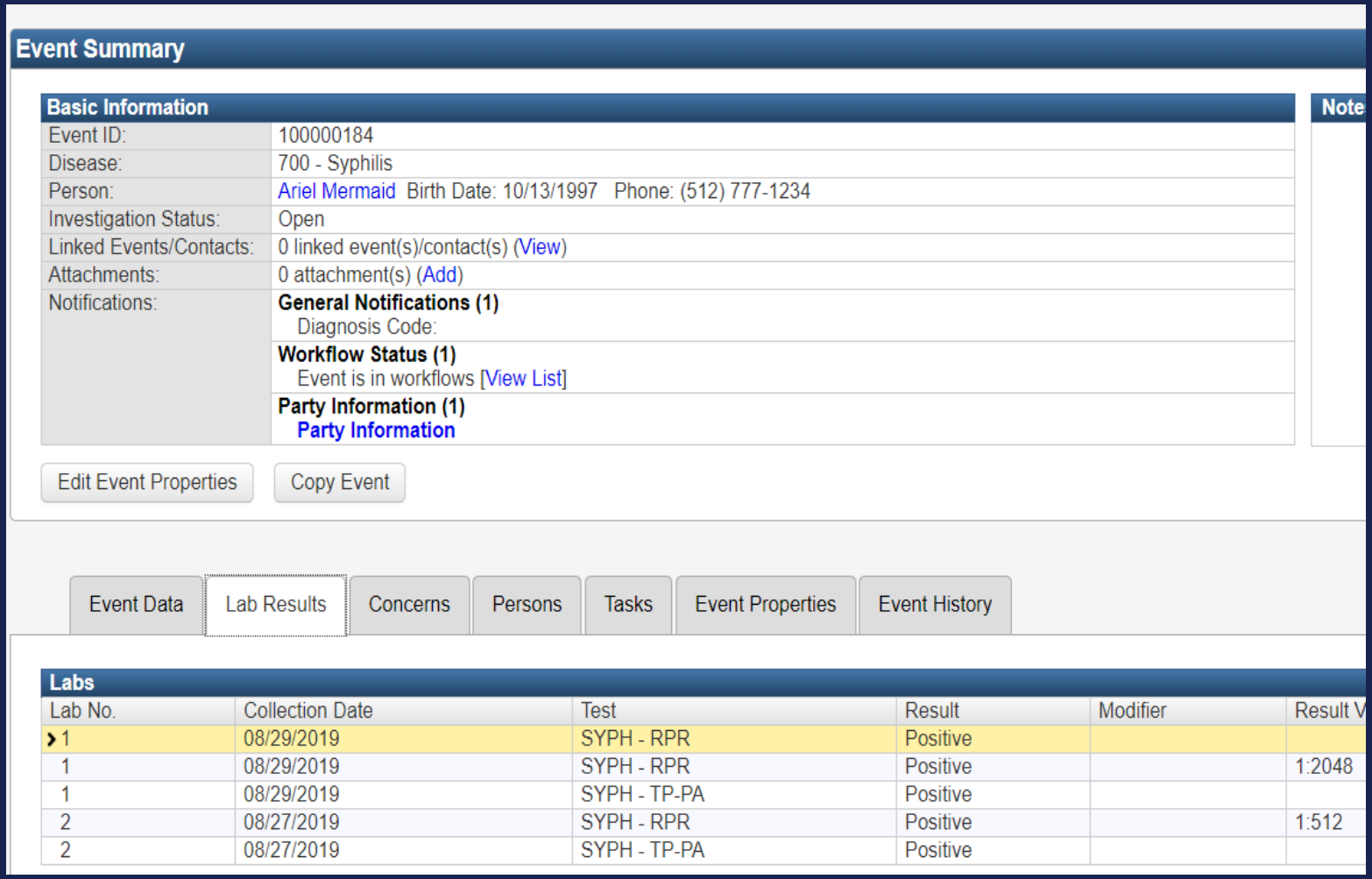
Break

15 Minutes

Mother's Event Summary



Event Summary

Basic Information

Event ID:	100000184
Disease:	700 - Syphilis
Person:	Ariel Mermaid Birth Date: 10/13/1997 Phone: (512) 777-1234
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**General Notifications (1)** Diagnosis Code:
	Workflow Status (1) Event is in workflows [View List]
	Party Information (1) Party Information

Note

Edit Event Properties | Copy Event

Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result V
› 1	08/29/2019	SYPH - RPR	Positive		
1	08/29/2019	SYPH - RPR	Positive		1:2048
1	08/29/2019	SYPH - TP-PA	Positive		
2	08/27/2019	SYPH - RPR	Positive		1:512
2	08/27/2019	SYPH - TP-PA	Positive		

Provider Report vs ELR

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Event Data | Lab Results | Concerns | Persons | Tasks | Event Prop

Labs

Lab No.	Collection Date	Test
1	08/29/2019	SYPH - RPR
1	08/29/2019	SYPH - RPR
1	08/29/2019	SYPH - TP-PA
> 2	08/27/2019	SYPH - RPR
2	08/27/2019	SYPH - TP-PA

Add Lab Result | Update Lab Result

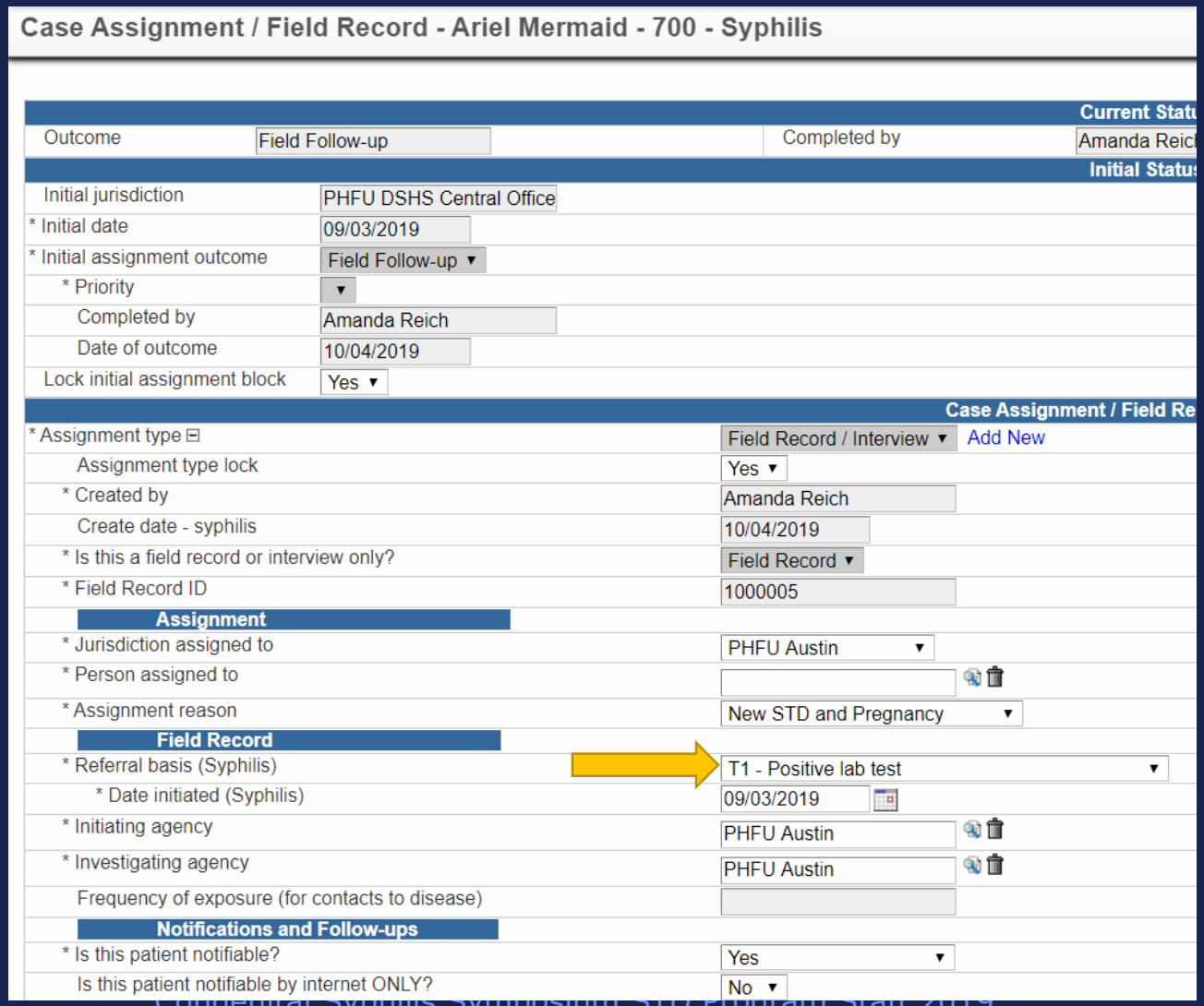
Details

Template:	STD_LAB_TEMPLATE
Last Update:	10/04/2019
Updated By:	Amanda Reich [areich]
Report Source	
Report Source:	Medical Record/Provider Report
Date Received at HD:	09/02/2019
HD Name where Lab Received:	Austin/Travis County
Patient Information	
First Name:	Ariel
Last Name:	Mermaid
Specimen Info	
Collection Date:	08/27/2019
Specimen Type:	Blood
Resulted Test	
Test:	SYPH - RPR
Result:	Positive
Result Value:	1:512
Resulted Test	
Test:	SYPH - TP-PA
Result:	Positive

Details

Template:	STD_LAB_TEMPLATE
Last Update:	10/04/2019
Updated By:	Amanda Reich [areich]
Report Source	
Report Source:	Laboratory Report
Date Received at HD:	09/03/2019
HD Name where Lab Received:	Austin/Travis County
Patient Information	
First Name:	Ariel
Last Name:	Mermaid
Date of Birth:	10/13/1997
Sex:	Female
Race:	Black or African American
Ethnicity:	Not Hispanic or Latino
Address1:	100 Atlantic Ocean Drive
City:	Oceania
State:	Texas
Zip:	77777
Specimen Info	
Collection Date:	08/29/2019
Accession Number:	2541000009762
Specimen Type:	Blood
Resulted Test	
Test:	SYPH - RPR
Result:	Positive
Resulted Test	
Test:	SYPH - RPR
Result:	Positive
Result Value:	1:2048
Resulted Test	
Test:	SYPH - TP-PA
Result:	Positive
Performing Laboratory	
New-Specify Performing Laboratory Name:	Under the Sea Hospital Labs
Ordering Facility & Ordering Provider	
New-Specify Ordering Facility Name:	Under the Sea Hospital
New-Specify Ordering Facility Type:	Hospital Inpatient
Additional Clinical Information	
Additional Clinical Information:	Labor & Delivery

Maternal Field Record



Infant Event Summary

TEXAS Health and Human Services
Texas Department of State Health Services

Event Summary

Basic Information

Event ID:	100000185
Disease:	700 - Syphilis
Person:	Baby Girl Ariel Mermaid Birth Date: 09/01/2019
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**Concerns (2)** **Morbidity: Event does not meet lab/symptom criteria for Confirmed neuro-involvement** **Congenital: Congenital syphilis question package must be completed**
	Congenital Syphilis Notifier (1) **Remember to make a new morbidity for this event.**
	General Notifications (1) Diagnosis Code:
	Workflow Status (1) Event is in workflows [View List]
	Party Information (1) **Party Information**

Notes (A

Edit Event Properties | Copy Event

Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result V
› 1	09/01/2019	SYPH - RPR	Positive		1:32
1	09/01/2019	SYPH - TP-PA	Positive		
1	09/01/2019	SYPH - CSF VDRL	Positive		1:4
1	09/01/2019	SYPH - CSF Protein			198
1	09/01/2019	SYPH - CSF WBC			43

Infant Field Record

TEXAS Health and Human Services
Texas Department of State Health Services

Initial Status

Initial jurisdiction	PHFU DSHS Central Office
* Initial date	09/03/2019
* Initial assignment outcome	Field Follow-up
* Priority	
Completed by	Amanda Reich
Date of outcome	10/07/2019
Lock initial assignment block	Yes

Case Assignment / Field Record Information

* Assignment type	Field Record / Interview — Add New
Assignment type lock	Yes
* Created by	Amanda Reich
Create date - syphilis	10/07/2019
* Is this a field record or interview only?	Field Record
* Field Record ID	1000007
Assignment	
* Jurisdiction assigned to	PHFU Austin
* Person assigned to	
* Assignment reason	New Syphilis
Field Record	
* Referral basis (Syphilis)	T1 - Positive lab test
* Date initiated (Syphilis)	09/03/2019
* Initiating agency	PHFU Austin
* Investigating agency	PHFU Austin
Frequency of exposure (for contacts to disease)	
Notifications and Follow-ups	
* Is this patient notifiable?	Other

Congenital Assignment

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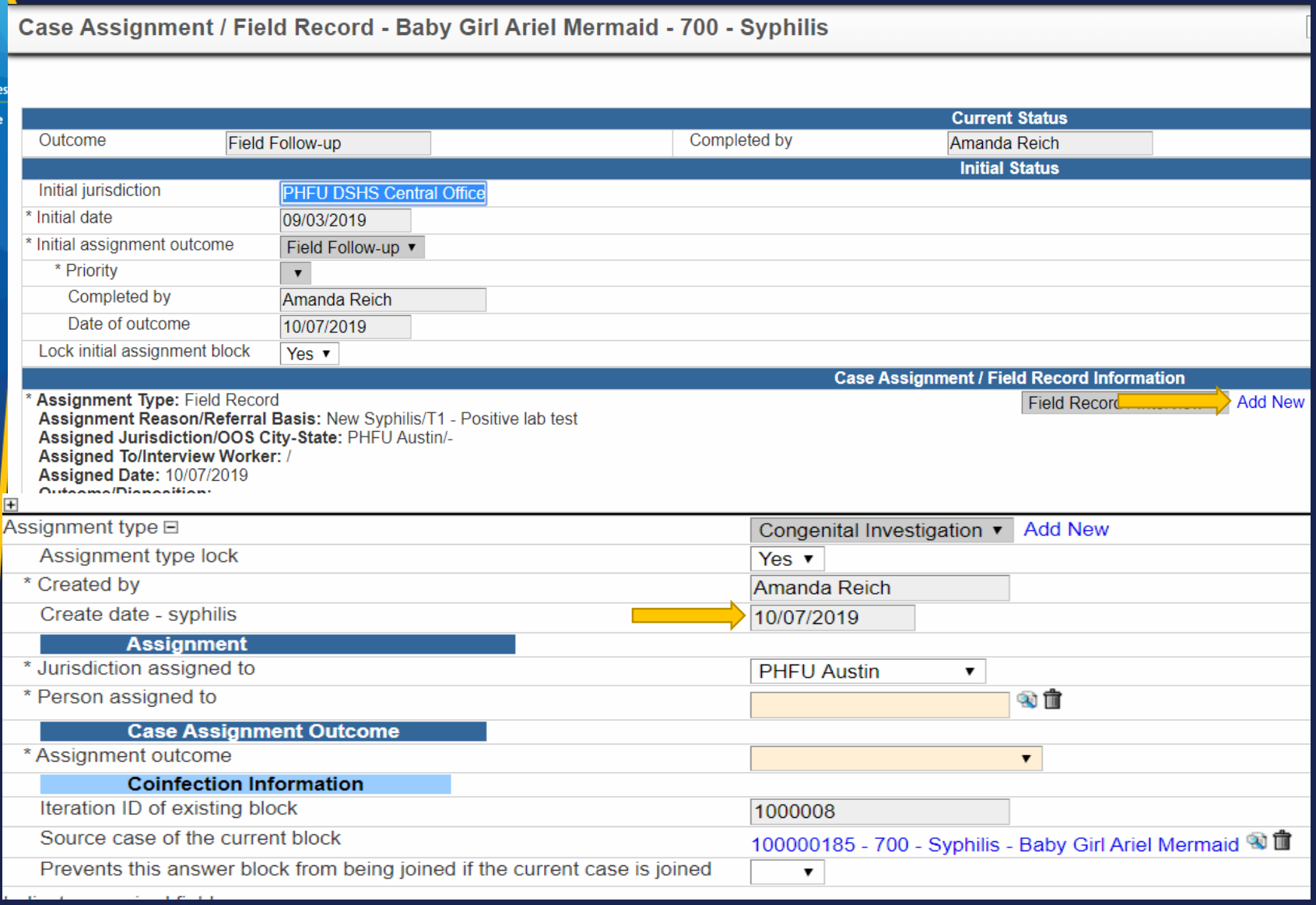
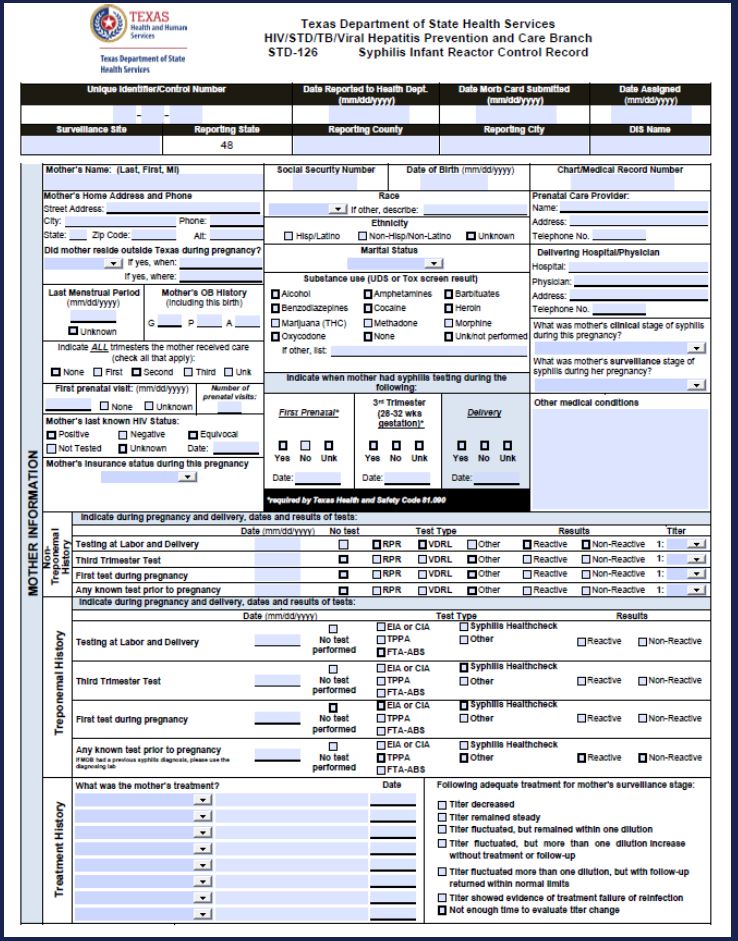


STD-126 Syphilis IRCR



Texas Department of State Health Services
HIV/STD/TB/Viral Hepatitis Prevention and Care Branch
STD-126 Syphilis Infant Reactor Control Record

Unique Identifier/Control Number	Date Reported to Health Dept. (mm/dd/yyyy)	Date Morb Card Submitted (mm/dd/yyyy)	Date Assigned (mm/dd/yyyy)

Surveillance Site	Reporting State	Reporting County	Reporting City	DIS Name
	48			

MOTHER INFORMATION

Mother's Name: (Last, First, MI) | Social Security Number | Date of Birth (mm/dd/yyyy) | Chart/Medical Record Number

Mother's Home Address and Phone
Street Address:
City: Phone:
State: Zip Code: Alt:

Race
If other, describe:
Ethnicity
☐ Hisp/Latino ☐ Non-Hisp/Non-Latino ☐ Unknown
Marital Status

Prenatal Care Provider:
Name:
Address:
Telephone No.

Delivering Hospital/Physician
Hospital:
Physician:
Address:
Telephone No.

Did mother reside outside Texas during pregnancy? If yes, when: If yes, where:

Last Menstrual Period (mm/dd/yyyy) ☐ Unknown
Mother's OB History (including this birth)
G P A

Substance use (UDS or Tox screen result)
☐ Alcohol ☐ Amphetamines ☐ Barbituates
☐ Benzodiazepines ☐ Cocaine ☐ Heroin
☐ Marijuana (THC) ☐ Methadone ☐ Morphine
☐ Oxycodone ☐ None ☐ Unk/not performed
If other, list:

What was mother's clinical stage of syphilis during this pregnancy?
What was mother's surveillance stage of syphilis during her pregnancy?

Indicate ALL trimesters the mother received care (check all that apply):
☐ None ☐ First ☐ Second ☐ Third ☐ Unk

First prenatal visit: (mm/dd/yyyy) ☐ None ☐ Unknown
Number of prenatal visits:

Mother's last known HIV Status:
☐ Positive ☐ Negative ☐ Equivocal
☐ Not Tested ☐ Unknown Date:

Mother's insurance status during this pregnancy

Indicate when mother had syphilis testing during the following:

First Prenatal*	3rd Trimester (28-32 wks gestation)*	Delivery
☐ Yes ☐ No ☐ Unk	☐ Yes ☐ No ☐ Unk	☐ Yes ☐ No ☐ Unk
Date:	Date:	Date:

*required by Texas Health and Safety Code §1.099

Other medical conditions

Non-Treponemal History

Indicate during pregnancy and delivery, dates and results of tests:

	Date (mm/dd/yyyy)	No test	Test Type			Results		Titer
Testing at Labor and Delivery		☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
Third Trimester Test		☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
First test during pregnancy		☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
Any known test prior to pregnancy		☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:

Treponemal History

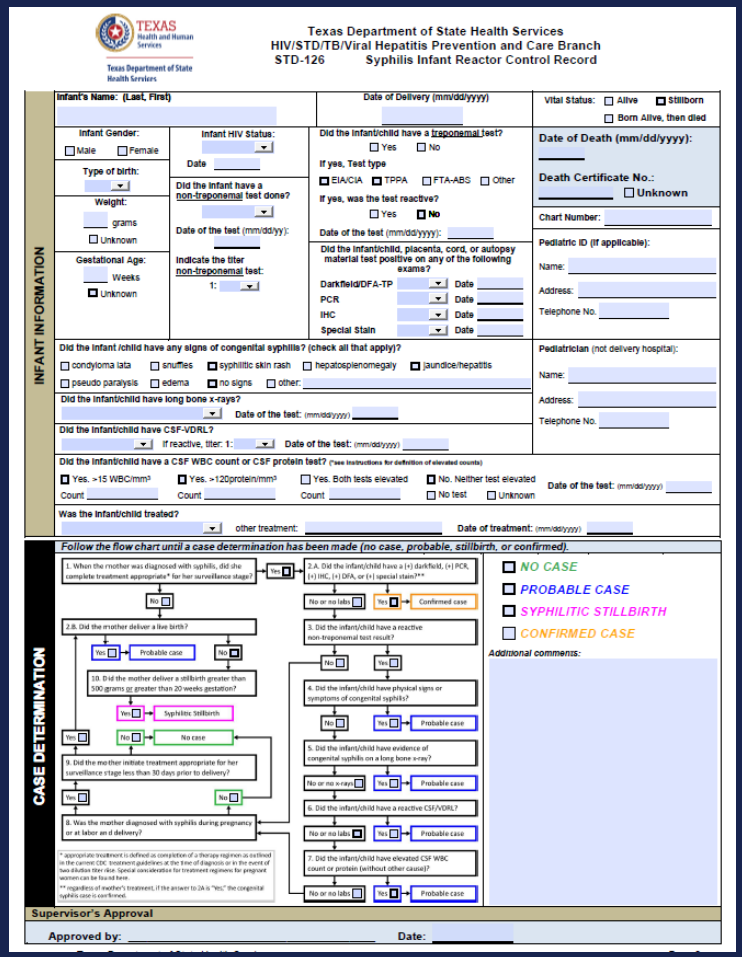
Indicate during pregnancy and delivery, dates and results of tests:

	Date (mm/dd/yyyy)	No test performed	Test Type		Results	
Testing at Labor and Delivery		☐	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
Third Trimester Test		☐	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
First test during pregnancy		☐	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
Any known test prior to pregnancy (If MOB had a previous syphilis diagnosis, please use the diagnosing lab)		☐	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive

Treatment History

What was the mother's treatment?	Date

Following adequate treatment for mother's surveillance stage:
☐ Titer decreased
☐ Titer remained steady
☐ Titer fluctuated, but remained within one dilution
☐ Titer fluctuated, but more than one dilution increase without treatment or follow-up
☐ Titer fluctuated more than one dilution, but with follow-up returned within normal limits
☐ Titer showed evidence of treatment failure of reinfection
☐ Not enough time to evaluate titer change



Texas Department of State Health Services
HIV/STD/TB/Viral Hepatitis Prevention and Care Branch
STD-126 Syphilis Infant Reactor Control Record

INFANT INFORMATION

Infant's Name: (Last, First) | Date of Delivery (mm/dd/yyyy) | Vital Status: ☐ Alive ☐ Stillborn ☐ Born Alive, then died

Infant Gender: ☐ Male ☐ Female
Type of birth:
Weight: grams ☐ Unknown
Gestational Age: Weeks ☐ Unknown

Infant HIV Status: Date
Did the infant have a non-treponemal test done?
Date of the test (mm/dd/yy):
Indicate the titer non-treponemal test: 1:

Did the infant/child have a treponemal test? ☐ Yes ☐ No
If yes, Test type ☐ EIA/CIA ☐ TPPA ☐ FTA-ABS ☐ Other
If yes, was the test reactive? ☐ Yes ☐ No
Date of the test (mm/dd/yyyy):
Did the infant/child, placenta, cord, or autopsy material test positive on any of the following exams?
Darkfield/DFA-TP Date
PCR Date
IHC Date
Special Stain Date

Date of Death (mm/dd/yyyy):
Death Certificate No.: ☐ Unknown
Chart Number:
Pediatric ID (if applicable):
Name:
Address:
Telephone No.
Pediatrician (not delivery hospital):
Name:
Address:
Telephone No.

Did the infant /child have any signs of congenital syphilis? (check all that apply)?
☐ condyloma lata ☐ snuffles ☐ syphilitic skin rash ☐ hepatosplenomegaly ☐ jaundice/hepatitis
☐ pseudo paralysis ☐ edema ☐ no signs ☐ other:

Did the infant/child have long bone x-rays? Date of the test: (mm/dd/yyyy)
Did the infant/child have CSF-VDRL? If reactive, titer: 1: Date of the test: (mm/dd/yyyy)
Did the infant/child have a CSF WBC count or CSF protein test? (*see instructions for definition of elevated counts)
☐ Yes, >15 WBC/mm³ Count
☐ Yes, >120protein/mm³ Count
☐ Yes, Both tests elevated Count
☐ No, Neither test elevated ☐ No test ☐ Unknown
Date of the test: (mm/dd/yyyy)
Was the infant/child treated? other treatment: Date of treatment: (mm/dd/yyyy)

CASE DETERMINATION

Follow the flow chart until a case determination has been made (no case, probable, stillbirth, or confirmed).

☐ NO CASE
☐ PROBABLE CASE
☐ SYPHILITIC STILLBIRTH
☐ CONFIRMED CASE

Additional comments:

Supervisor's Approval
Approved by: Date:

THISIS CS QP DEMO

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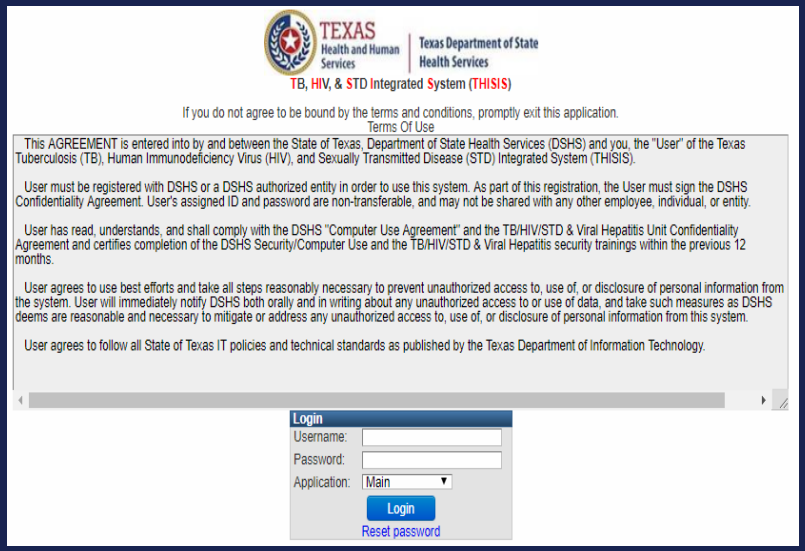
Texas Department of State Health Services

THISIS Test Environment

- Congenital Syphilis QP
- Morbidity
- Attachments
- Closing Assignments



Mother's Event Summary

TEXAS Health and Human Services
Texas Department of State Health Services

Event Summary

Basic Information

Event ID:	100005140
Disease:	700 - Syphilis
Person:	Elsa Snow Birth Date: 01/01/1994 Phone: (214) 555-2525
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s)
Notifications:	**General Notifications (1)** Diagnosis Code: **Party Information (1)** Party Information

Notes (Add/Edit | Show My Notes)

10/01/2019 10:37 (Generic) - Amanda Reich
Delivered stillborn male infant on 09/25/2019

Edit Event Properties

Event Data | Lab Results | Concerns | Persons | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result Value	Ordering Faci
> 1	09/25/2019	SYPH - TP-PA	Positive			
1	09/25/2019	SYPH - RPR	Positive		1:256	

Case Assignment/Field Record Question Package

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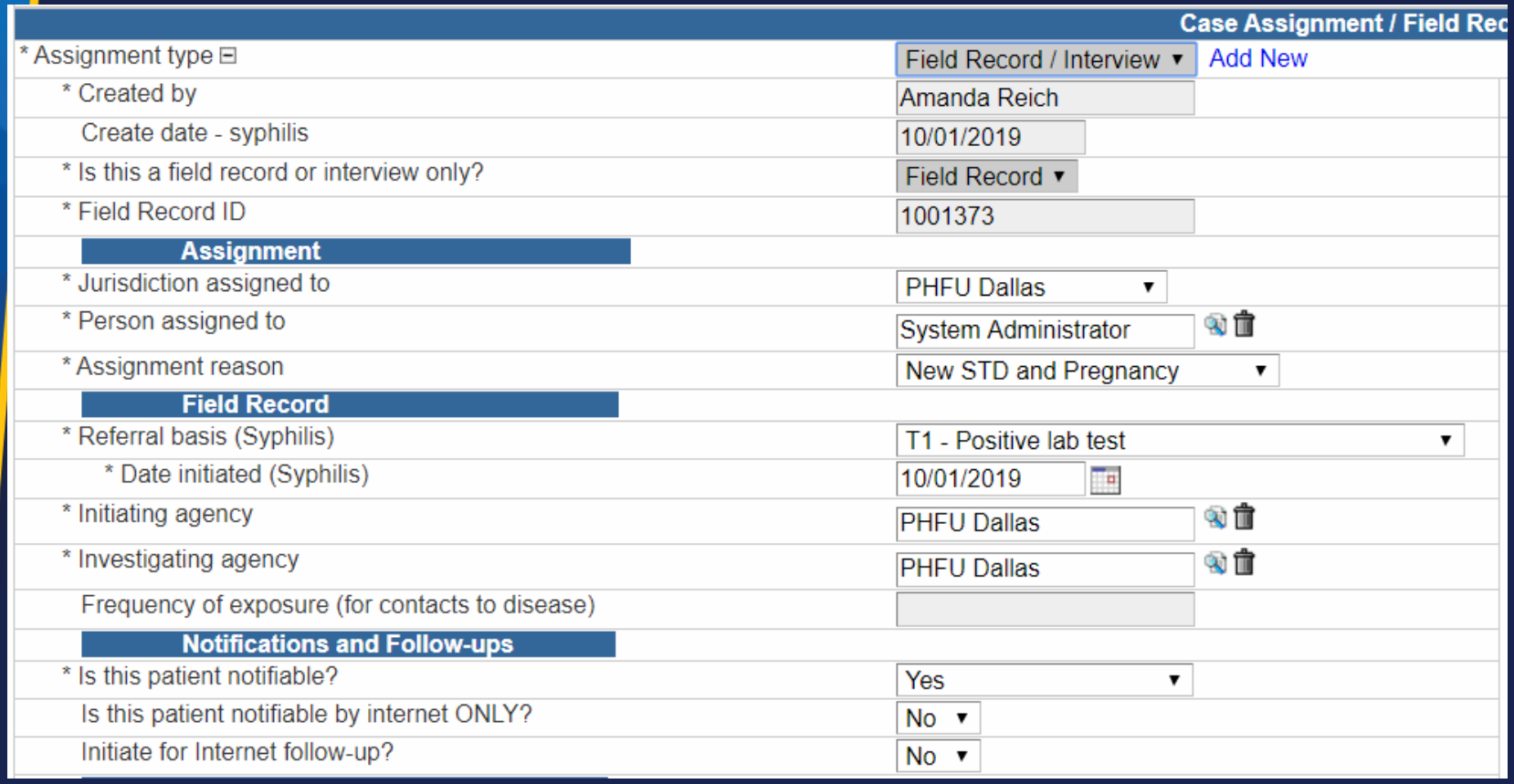
Texas Department of State Health Services



Case Assignment / Field Rec	
* Assignment type	Field Record / Interview ▾ Add New
* Created by	Amanda Reich
Create date - syphilis	10/01/2019
* Is this a field record or interview only?	Field Record ▾
* Field Record ID	1001373
Assignment	
* Jurisdiction assigned to	PHFU Dallas ▾
* Person assigned to	System Administrator
* Assignment reason	New STD and Pregnancy ▾
Field Record	
* Referral basis (Syphilis)	T1 - Positive lab test ▾
* Date initiated (Syphilis)	10/01/2019
* Initiating agency	PHFU Dallas
* Investigating agency	PHFU Dallas
Frequency of exposure (for contacts to disease)	
Notifications and Follow-ups	
* Is this patient notifiable?	Yes ▾
Is this patient notifiable by internet ONLY?	No ▾
Initiate for Internet follow-up?	No ▾

Pregnancy Status

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Field Record Address			
Select Address at the Time of this Event			
Address type	Home		
Residence type	House		
Street address	25 Frosty Lane		
Street address 2			
* City	Dallas	* State	TX
Zip code	75210	County	Dallas County
Country	USA		
Phone - cell	(214) 555-2525	Phone - land line	
Phone - work			
Locating Information/Other			
Locating information/Other		Employment information	
Physical Attributes			
Pregnant (enter pregnancy status in clinical QP if patient is found)	Yes	Number of weeks pregnant (must be a number between 1-44 or 999 to indicate unknown)	22

Pregnancy Information	
* Was the patient pregnant at the time of this event?	Yes
Number of weeks pregnant at the time of this event?	22
Approximate due date	01/29/2020
Currently in prenatal care?	No
Congenital investigation status	Pending
Additional pregnancy in the last 12 months?	No
New pregnancy after syphilis diagnosis	

Creating Congenital FR and Assignment

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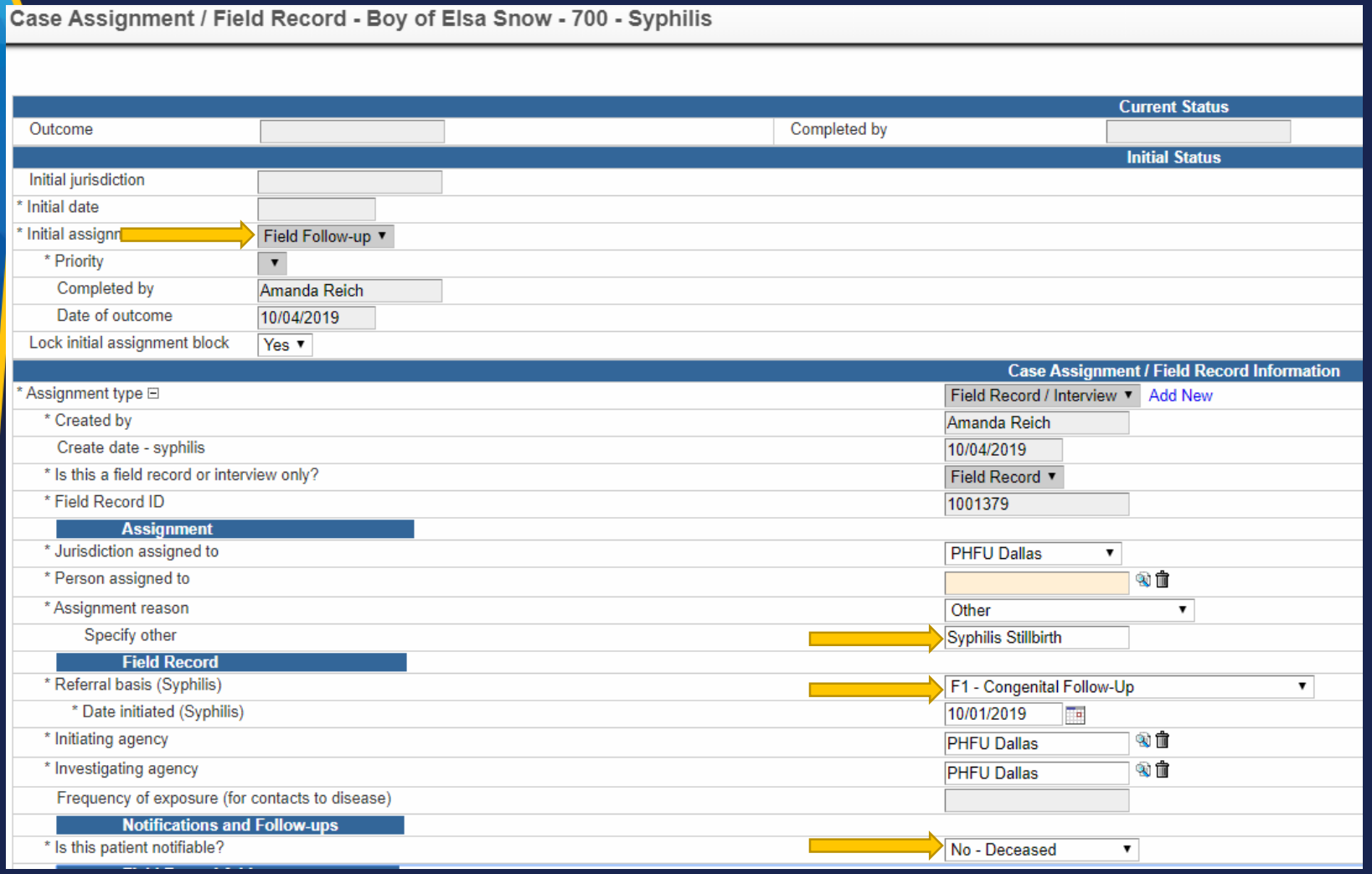
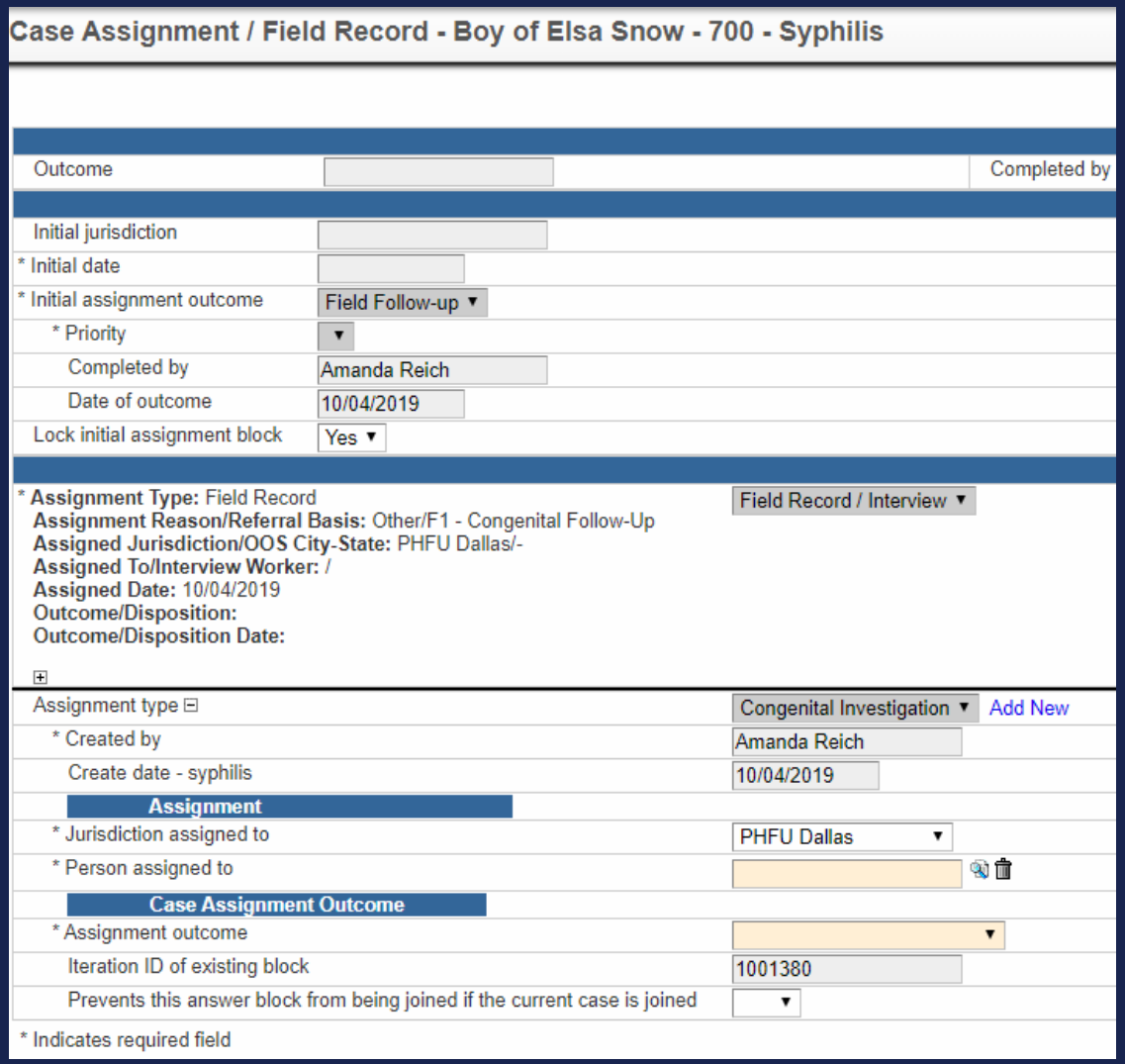


Creating Congenital FR and Assignment



Create both the Field Record and Congenital Investigation Assignment **simultaneously**

CS QP: Maternal Information

Demographics

Mother's First Name	Elsa	Mother's Last Name	Snow	Mother's Date Of Birth	01/01/1994
Legacy Mother's city		Legacy Mother's state			
Legacy Mother's zip code					
Legacy Mother's county		Legacy Mother's country			
Mother's event linked to this event	Yes				
* Event ID of linked mother	100005140 - 700 - Syphilis - Elsa Snow				
Mother's first name	Elsa	Mother's last name	Snow		
Mother's birth date	01/01/1994				
Mother's race	White	Mother's ethnicity	Not Hispanic or Not Latino		
Mother's city	Dallas	Mother's state	TX		
Mother's zip code	75210				
Mother's county	Dallas County	Mother's country	USA		
Mother's current marital status	Single, Never Married				
Mother had insurance during pregnancy	No				
Was Mother's Treatment Adequate	NO				
Did mom reside outside of Texas during pregnancy?	No				

Labor and Delivery

* Date of delivery	09/26/2019	Type of birth	Singleton
Location of birth	Hospital		
Delivering facility	*Not answered*		
Do you want to create a new facility if you could not find your facility in system?			
If it is not any facility, please specify your own answer			
Mother's medical record number at delivering hospital	0123456789		

Maternal Treatment

* Mom received treatment	Yes
Mother's treatment	2.4 MU benzathine penicillin

Maternal Syphilis

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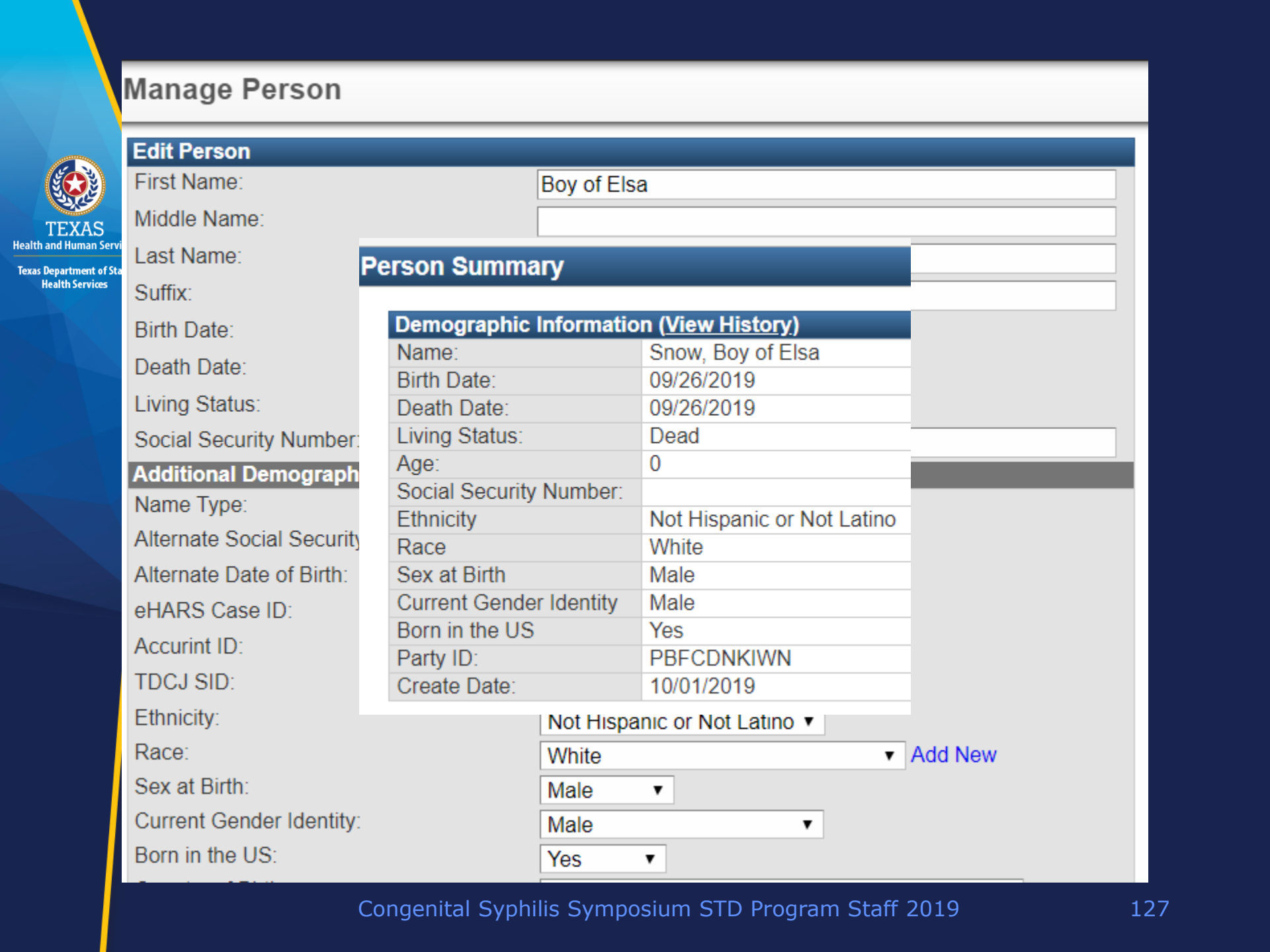
Maternal Clinical			
Last menstrual period	☑ Unknown		
* Maternal gravida	2	* Maternal parity	1
* Number of stillbirths prior to this pregnancy	0	* Number of miscarriages and abortions prior to this pregnancy	1
* Prenatal care	Unknown		
* Mother's clinical stage of syphilis during pregnancy	Late (750) or late latent (745/755)	* Mother's surveillance stage of syphilis during pregnancy	Late (750) or late latent (745/755)

Maternal Testing	
* Mother tested during pregnancy/delivery	Yes
* Non-treponemal or treponemal tests at first prenatal visit	No
* Non-treponemal or treponemal tests at 28-32 weeks gestation	No
* Non-treponemal or treponemal tests at delivery	Yes
Date of mother's non-treponemal test (List most recent test first)	09/25/2019 Add New
* Test type	RPR
* Test qualitative result	Reactive
* Test titer	1:256
Date of mother's treponemal test (List most recent test first)	09/25/2019 Add New
* Test type	TP-PA
* Test result	Reactive
* Mother's HIV status during pregnancy	Positive
* Date of test	09/25/2019


Manage Person
Edit Person
First Name:
Boy of Elsa
Middle Name:
Last Name:
Suffix:
Birth Date:
Death Date:
Living Status:
Social Security Number:
Additional Demograph
Name Type:
Alternate Social Security
Alternate Date of Birth:
eHARS Case ID:
Accurint ID:
TDCJ SID:
Ethnicity:
Not Hispanic or Not Latino
Race:
White
Add New
Sex at Birth:
Male
Current Gender Identity:
Male
Born in the US:
Yes
Person Summary
Demographic Information (View History)
Name: Snow, Boy of Elsa
Birth Date: 09/26/2019
Death Date: 09/26/2019
Living Status: Dead
Age: 0
Social Security Number:
Ethnicity: Not Hispanic or Not Latino
Race: White
Sex at Birth: Male
Current Gender Identity: Male
Born in the US: Yes
Party ID: PBFCDNKIWN
Create Date: 10/01/2019

Baby's Information

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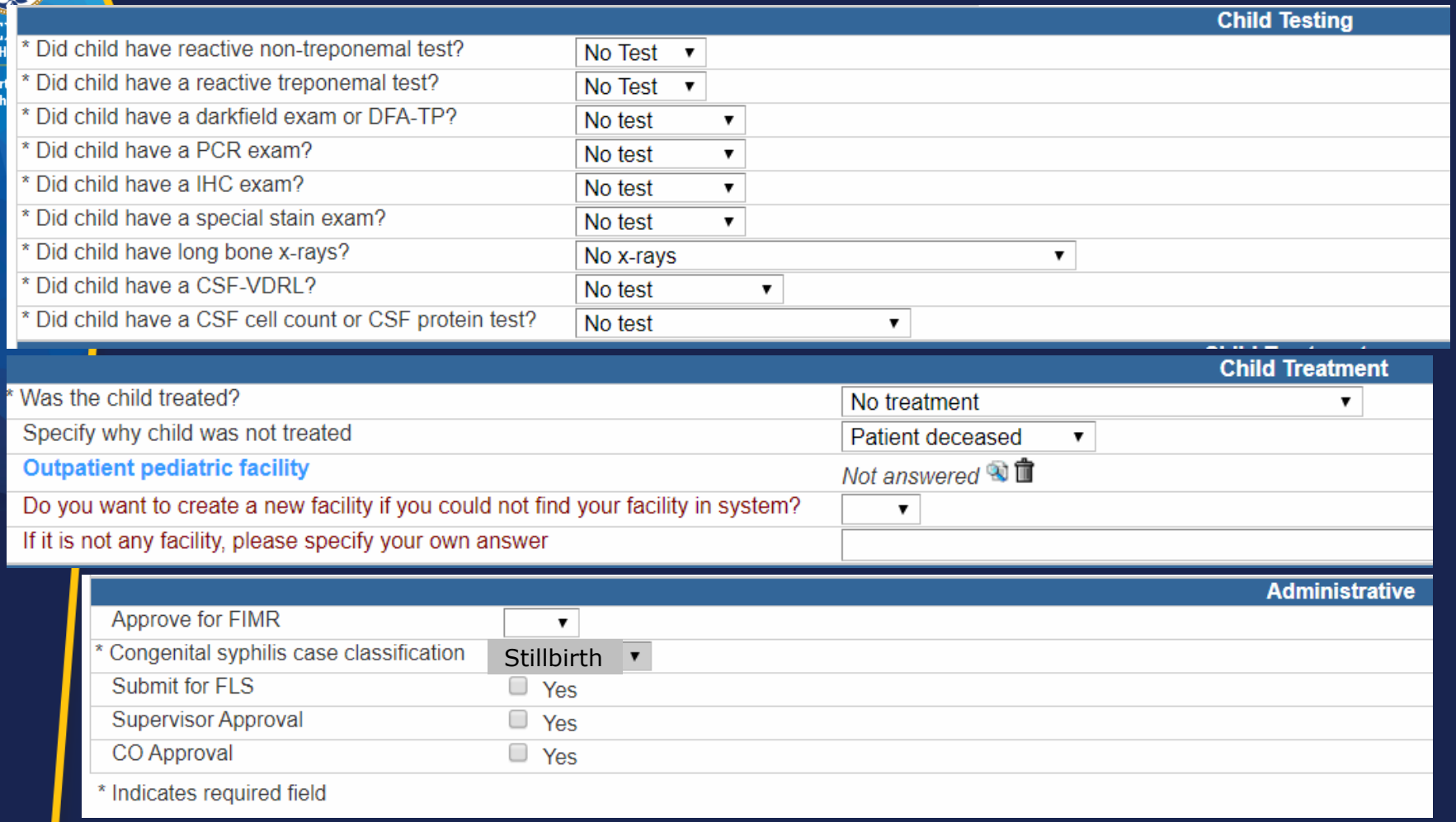
Child Information

* Child vital status	Stillborn				
Date of death (update in person tab)	09/26/2019				
Was an autopsy performed?	Unknown	Death certificate number		Give cause(s) of death from death certificate	Congenital Syphilis
Infant Medical Record	N/A				

Child Clinical

* Estimated gestational age at birth, in weeks (Use 999 for unknown)	22				
Birth weight (specify units) of child	Grams				
* Birth weight (grams)	312	Birth weight (lbs)	0	Birth weight (oz)	11
* Was the child asymptomatic?	Yes - the child was asymptomatic				

Baby's Syphilis



Child Testing

* Did child have reactive non-treponemal test?	No Test
* Did child have a reactive treponemal test?	No Test
* Did child have a darkfield exam or DFA-TP?	No test
* Did child have a PCR exam?	No test
* Did child have a IHC exam?	No test
* Did child have a special stain exam?	No test
* Did child have long bone x-rays?	No x-rays
* Did child have a CSF-VDRL?	No test
* Did child have a CSF cell count or CSF protein test?	No test

Child Treatment

* Was the child treated?	No treatment
Specify why child was not treated	Patient deceased
Outpatient pediatric facility	*Not answered*
Do you want to create a new facility if you could not find your facility in system?	
If it is not any facility, please specify your own answer	

Administrative

Approve for FIMR	
* Congenital syphilis case classification	Stillbirth
Submit for FLS	Yes
Supervisor Approval	Yes
CO Approval	Yes

* Indicates required field

Closing the Assignment

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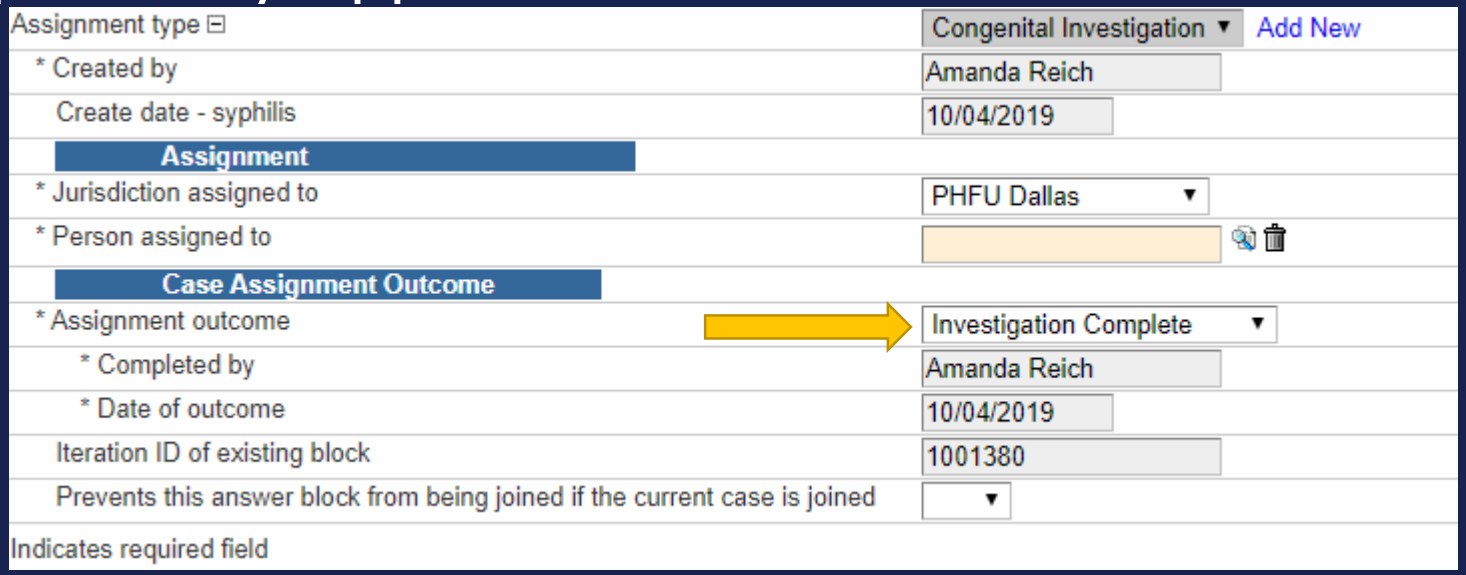
Texas Department of State Health Services

Reminder: After submitting the CS QP for supervisory approval



change the investigation status to complete

Mother's Event History

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Texas Department of State Health Services

Event Summary

Basic Information	
Event ID:	100000186
Disease:	700 - Syphilis
Person:	Tiana Princess Frog Birth Date: 07/01/1984 Phone: (832) 777-7777
Investigation Status:	Open
Linked Events/Contacts:	0 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**General Notifications (1)** Diagnosis Code:
	Party Information (1) **Party Information**

Notes

Edit Event Properties | Copy Event

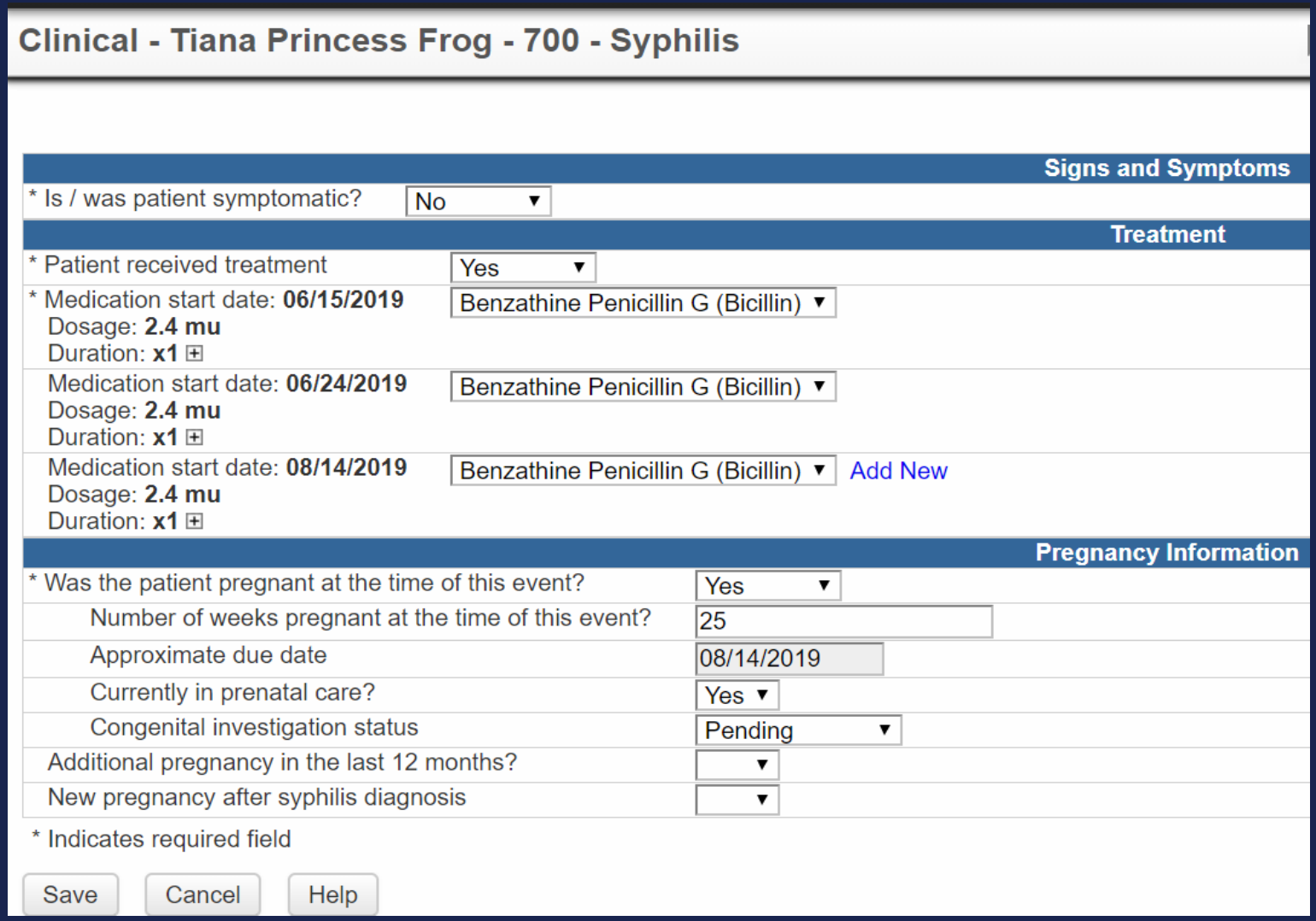
Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result V
› 1	05/01/2019	SYPH - RPR	Positive		1:32
1	05/01/2019	SYPH - TP-PA	Positive		
2	10/01/2019	SYPH - RPR	Positive		1:8
2	10/01/2019	SYPH - TP-PA	Positive		
3	08/01/2019	SYPH - RPR	Positive		1:64

Add Lab Result | Update Lab Result

Mother's Clinical



Clinical - Tiana Princess Frog - 700 - Syphilis

Signs and Symptoms

* Is / was patient symptomatic? No

Treatment

* Patient received treatment: Yes

* Medication start date: **06/15/2019** — Benzathine Penicillin G (Bicillin)
  Dosage: **2.4 mu**
  Duration: **x1**

Medication start date: **06/24/2019** — Benzathine Penicillin G (Bicillin)
Dosage: **2.4 mu**
Duration: **x1**

Medication start date: **08/14/2019** — Benzathine Penicillin G (Bicillin) Add New
Dosage: **2.4 mu**
Duration: **x1**

Pregnancy Information

* Was the patient pregnant at the time of this event? Yes
  Number of weeks pregnant at the time of this event? 25
  Approximate due date: 08/14/2019
  Currently in prenatal care? Yes
  Congenital investigation status: Pending
Additional pregnancy in the last 12 months?
New pregnancy after syphilis diagnosis

* Indicates required field

Save Cancel Help

Infant Event Summary

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Texas Department of State Health Services

Event Summary

Basic Information

Event ID:	100000187
Disease:	700 - Syphilis
Person:	Baby Boy Tiana Prince Frog Birth Date: 10/01/2019
Investigation Status:	Open
Linked Events/Contacts:	1 linked event(s)/contact(s) (View)
Attachments:	0 attachment(s) (Add)
Notifications:	**Concerns (1)** Congenital: Congenital syphilis question package must be completed
	Congenital Syphilis Notifier (1) Remember to make a new morbidity for this event.
	General Notifications (1) Diagnosis Code:
	Party Information (1) Party Information

Notes

Edit Event Properties | Copy Event

Event Data | Lab Results | Concerns | Persons | Tasks | Event Properties | Event History

Labs

Lab No.	Collection Date	Test	Result	Modifier	Result
1	10/01/2019	SYPH - FTA-ABS	Positive		
1	10/01/2019	SYPH - RPR	Positive		1:4

THISIS CS QP DEMO

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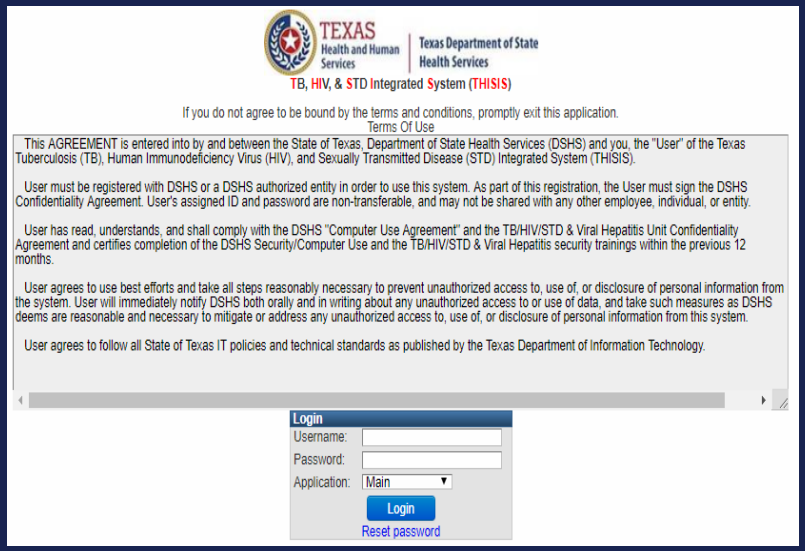
Texas Department of State Health Services

THISIS Test Environment

- Review of Medical Chart
  - Hospital Record
    - Next Steps?
- Field Record(s)
- Congenital Syphilis QP
- Clinical Scenario
  - Treatment Recommendation
- Closing Assignment



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Thank you!

Readjourn tomorrow

Friday, 10/11 at 9:00 am

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Texas Department of State Health Services

Good Morning

Day Two: Congenital Syphilis Symposium for STD Program Staff

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Texas Department of State Health Services

Welcome Desirae

Special Speaker

Congenital Syphilis

Lupita Thornton
PHI Manager - STD

Maria Martha
PHI Specialist HIV/STD

HOUSTONHEALTH.ORG

Objectives

HOUSTON HEALTH DEPARTMENT

Congenital syphilis evaluation

Lessons Learned

Future Plans

Congenital Syphilis

HOUSTON HEALTH DEPARTMENT

*The **mission** of the Houston Health Department is to work in partnership with the community to promote and protect the health and social well-being of Houstonians and the environment in which they live.*

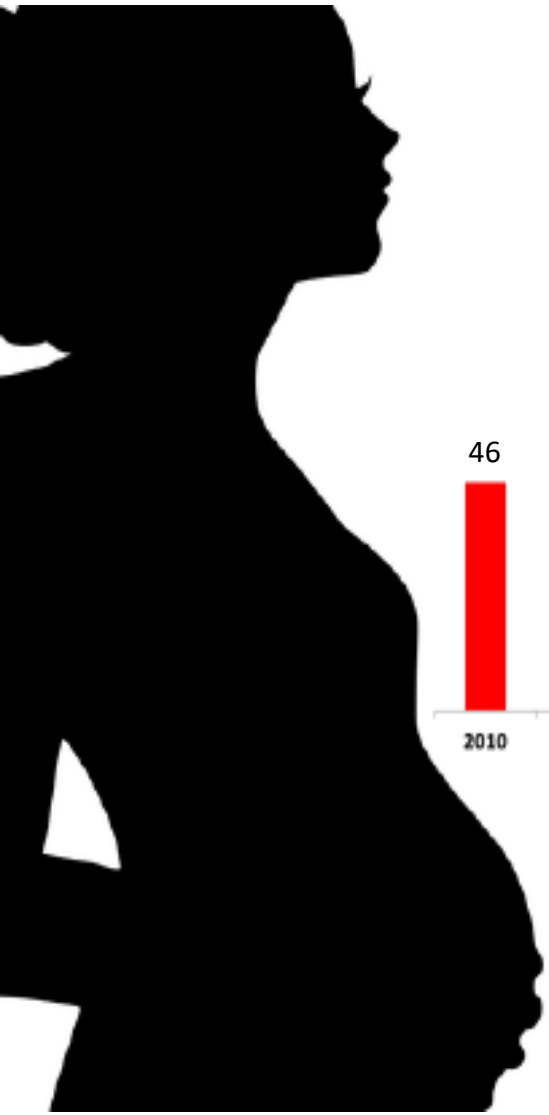
*Our **vision** is the elimination of HIV, viral Hepatitis, and STD's through the adoption of health promoting behaviors among the residents of Houston, Harris County.*

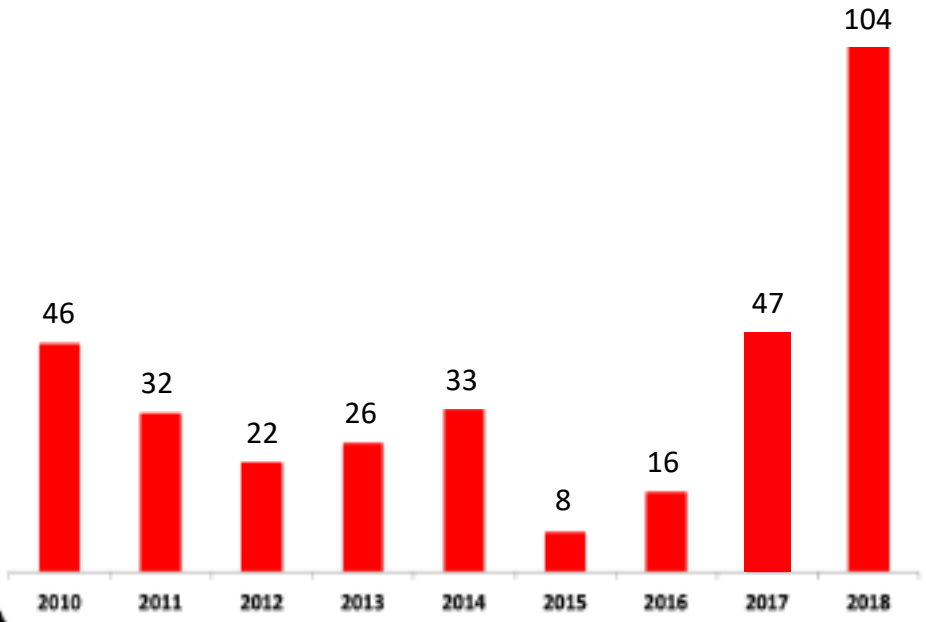
Essential functions:

- ***Inform, educate, and empower communities about HIV, viral Hepatitis and STD health issues.***
- ***Mobilize partnerships with key community stakeholders to identify and prevent the spread of HIV, viral Hepatitis and sexually transmitted diseases.***

Morbidity

HOUSTON HEALTH DEPARTMENT





Number of Probable Congenital Cases in Houston/Harris County

Congenital Syphilis Evaluation

HOUSTON HEALTH DEPARTMENT

- *CS Investigations*
  - *Surveillance Transition*
  - *All reactors of child bearing age are investigated*
  - *Hospital calling for record searches*
    - *Obtain the mother and baby information*
- *Rotation visits to large public L&D hospitals*

Current Practice

HOUSTON HEALTH DEPARTMENT

One Surveillance Investigator and back up

- Coordination of cases
- Access to EHR

Capacity Building activities with DSHS

- Monthly Calls
- Discuss cases, updates

FIMR participation

- Collaborating

Other Process Decisions

- Two employees to conduct QA

Lessons Learned

HOUSTON HEALTH DEPARTMENT

Did not work:

- Combined surveillance duties along with congenital responsibilities
- Passive surveillance
- Change of surveillance supervision

What worked:

- STDMIS ☺
- Closely monitoring the classification and diagnosis of females of child bearing age
- Using the THISIS calculator to ensure EDC
- Working closely with DSHS
- Not completing the questionnaire packet for non-congenitals

Future Plans

HOUSTON HEALTH DEPARTMENT

- Maternity
  - Provider follow-up
  - Field activities
  - Interview activities
  - Reporting cases
- Neonates
  - Provider follow-up
  - Field activities
  - Reporting cases
- L&D
  - Provider follow-up
  - Field activities
  - Reporting cases
  - Interview activities
  - FIMIR Interviews

- Increase provider visitations
  - One pager
  - Sharing the new Texas Law (Texas Health & Safety Code 81.090)
  - We will continue to collaborate with providers to ensure timely reporting with complete information.

CONGENITAL SYPHILIS IN DALLAS COUNTY

Amy Carter, BS, CHES

Dallas County Health and Human Services

Front Line Supervisor

DCHHS
Safe families, healthy lives
Dallas County Health and Human Services

HISTORICAL OVERVIEW

- Dallas County experienced being understaffed for several years
- Tried having all DIS working Congenital Syphilis (CS) records
- Changed to one DIS working CS and routine Field Records (FR)
- Currently one DIS works CS primarily with routine FR's occasionally

UNDERSTAFFING

- **Our understaffing lead to:**
  - Under reporting of births in Dallas County
  - Increased workload for DIS
  - Delay in Lab entry from STD Surveillance Staff
  - Delay in reporting to Central Office
- **How it looked**
  - One DIS working CS paper and routine paper
    - Average of over 40 field records.
  - Multiple errors on reports

WORKING CS PAPER

- Then: 4-6 DIS
  - Had to balance between routine paper and CS responsibilities
  - CS DIS Skipped in FR assignment rotation
  - Workload
    - T1 Mom and Baby, routine syphilis and HIV field records
    - All interviews from the clinic
  - Clinic Rotation
    - Full day clinic shifts every other day
    - Provider Visit every other Thursday Morning

- Now: 12 DIS
  - One CS DIS
    - One DIS trained as back-up (Team Lead)
    - FLS used to work CS Paper
  - Improved Tracking Tools for Pregnant Women
    - DCHHS Epidemiology generated tools
    - Utilization of THISIS built-in CSI workflow
    - Pregnant Woman Algorithm in Interview Rooms
  - Workload
    - F1
    - F4
    - T1: Infant, Women diagnosed at L&D, and one routine syphilis & HIV per month
    - Clinic Rotation
      - One Interview per week from Clinic
      - 3 Half Day Clinic shifts per week
      - Provider Visit every Thursday

LESSONS LEARNED

- Develop site specific CS Manual
  - Written Steps for working CS Field Records
  - Provider Contacts
    - How to request records/request forms
    - List of who needs face to face visit for records
  - Example STD 126 forms
  - Screenshots of THISIS (De-identified)
- Working with non-compliant providers
  - Develop relationships with provider
    - Provider Visits
    - Partner with Providers for education opportunities
    - Warm-hand offs with new staff
- Building relationships with neighboring Jurisdictions
- Monitoring CS DIS workload

SUCCESSES

- Timely Reporting
- Accurate reporting of investigations
- Building rapport with main delivery Hospital System
- FIMR
  - Maternal Interviewing
  - Standing up our own FIMR
  - Internal Case Reviews
- Person signing off on reports has strong base knowledge of reporting
- Cross training
  - Training whole staff on CS
  - Bi-Weekly Huddles

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Panel Q&A

Amy and Lupita

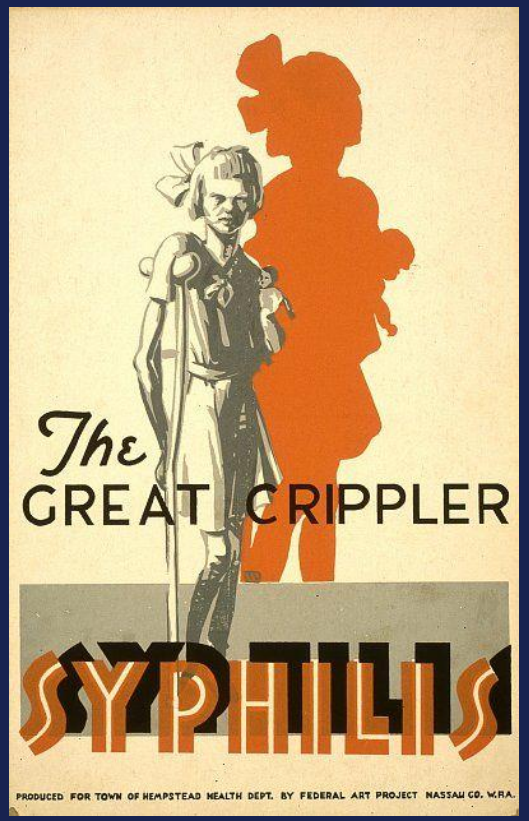
Small Group Discussion!

TEXAS Health and Human Services

Texas Department of State Health Services

Please sit with other persons by your **role** in the congenital syphilis investigation process

- What are somethings that work well within your agency?
- In your role, what are somethings that you would like to take back to your agency?
- What are something you heard that you could implement at your agency?



Planning Committee

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Texas Department of State Health Services

STD-126 Syphilis Infant Reactor Control Record Instructions

Rev. March 11, 2019

TEXAS Department of State Health Services

The Syphilis Infant Reactor Control Record (STD-126) is a dual-purpose form for field-based case investigation and surveillance unit morbidity reporting of congenital syphilis. It is intended to provide:

- Statewide standardization of congenital syphilis case determination
- A two tier quality control system
- Streamlined reporting of congenital cases
- A practical system for both large and small programs

Reporting of Congenital Syphilis Cases is required by the Texas Department of State Health Services. There are four types of congenital case determinations that may be reported:

1. No Case
2. Confirmed Case
3. Stillbirth
4. Probable Case

Please refer https://wwwn.cdc.gov/nndss/conditions/syphilis/case-definition/2018/ for official case definitions of congenital syphilis cases.

The information needed to determine whether an infant or a child meets the criteria for the CDC/Council for State and Territorial Epidemiology (CSTE) surveillance case definition of CS may be found in a variety of places:

- The mother's syphilis reactor file
- The mother's hospital record
- The infant's or child's hospital record
- The infant's or child's birth certificate or death certificate

No single record is likely to contain all the information needed; therefore, information should be obtained from several sources. For example, the following steps may be taken to evaluate a report of a reactive STS obtained at delivery:

- Check the STD program's reactor file to determine whether the mother had evidence of untreated or inadequately treated syphilis before delivery.
- Review the mother's hospital and prenatal records for demographic information, prenatal care information, findings at delivery (e.g., genital lesions, abnormal placenta, or stillborn infant), and serologic test results.
- Review the infant's or child's medical record for physical examination findings, radiographic, serologic, cerebrospinal fluid (CSF), other test results, and treatment information.

This form was created to assist with filling out the required fields for reporting requirements for the Centers for Disease Control and Prevention (CDC). You may find the CDC form and instructions at:

CDC Congenital Syphilis Form
CDC Congenital Syphilis Instructions

General Instructions

This form is a fillable Portable Document File (PDF) and must be completed electronically using Adobe.

This form should be completed after the information is obtained and entered into Maven Disease Surveillance Suite TB, HIV, and STD Integrated System (THISIS). Please be sure all of the information entered is reflective of the information collected.

A supervisor must review the form and the form must be submitted according to the Texas Department of State Health Services Program Operating Procedures (Chapter 8: Surveillance, https://www.dshs.state.tx.us/hivstd/pops/chap08.shtm). After completing the form, upload it as an attachment to the infant or child's syphilis event in THISIS.

Out of Jurisdiction Reporting

The jurisdiction where the infant is born *regardless* of mother's address is the jurisdiction responsible for completing the STD-126.

- Example A: Mother's address is in Katy (Region 6/5S); she delivers in Houston. City of Houston Health Department is responsible for completing the STD-126.
- Example B: Mother's address is in Seguin (Region 8); she delivers in San Antonio. San Antonio Metro Health District is responsible for completing the STD-126.

The jurisdiction where mother resides *regardless* where she delivered is the jurisdiction where morbidity is assigned.

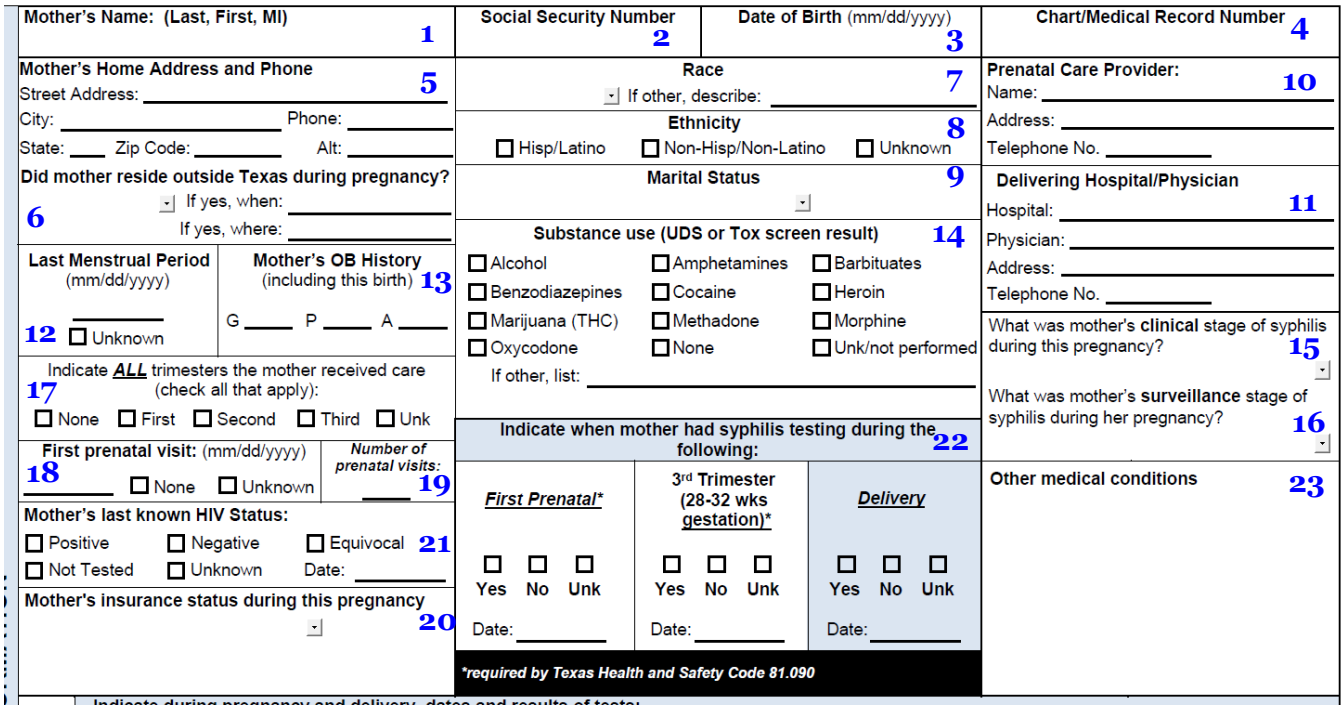
- Example C: Mother's address is Arlington; she delivers at Parkland Hospital in Dallas. Dallas County Health & Human Services will complete the STD-126, the morbidity will be assigned to Tarrant County.
- Example D: Mother's address is Georgetown; she delivers in Austin. Austin Public Health is responsible for completing the STD-126, the morbidity will be assigned to Williamson County (Region 7).

Reporting Site Information

Unique Identifier/Control Number		Date Reported to Health Dept. (mm/dd/yyyy)	Date Morb Card Submitted (mm/dd/yyyy)	Date Assigned (mm/dd/yyyy)
A - -		B	C	D
Surveillance Site	**Reporting State**	**Reporting County**	**Reporting City**	**DIS Name**
E	48	F	G	H

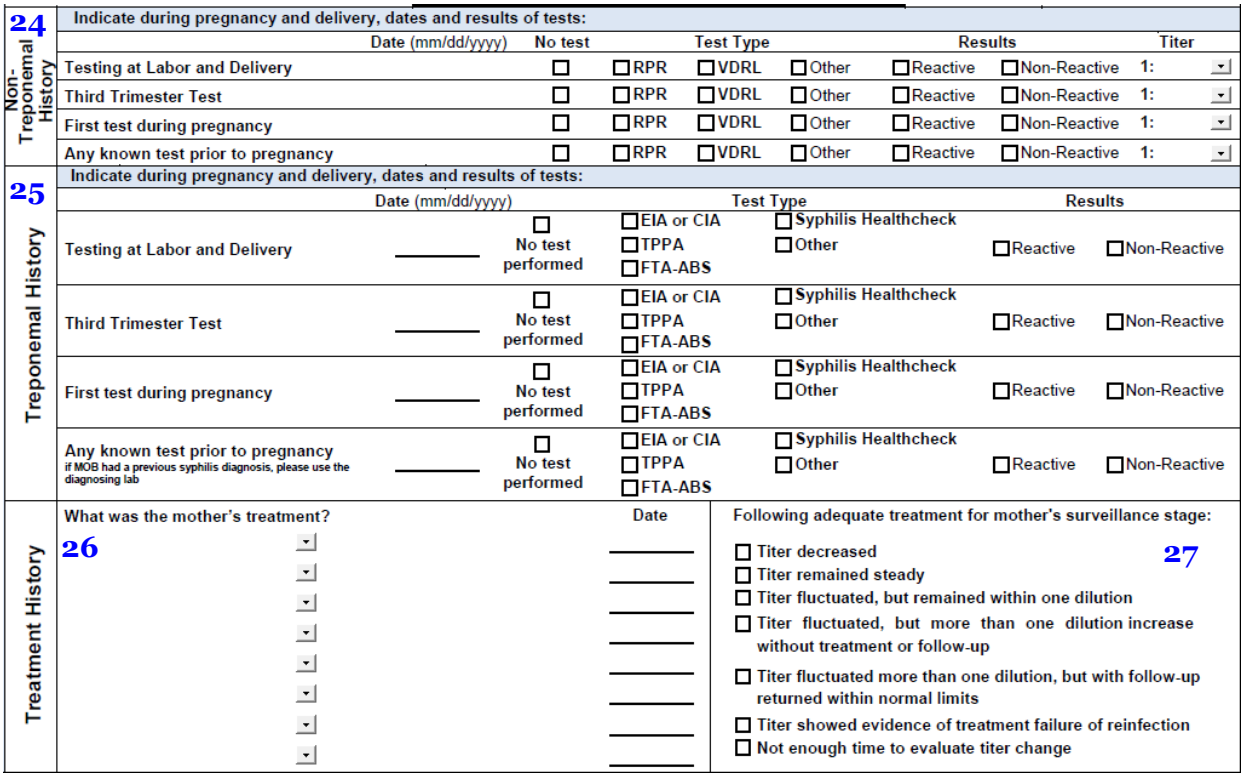
A. Unique Identifier/Control Number: A seven-digit code is required for this field. This number is automatically generated by THISIS. Utilize the THISIS generated number in this field.
B. Date Reported to Health Department: The date the lab(s) or birth of the infant was initially reported to the health department.
C. Date Morbidity Card Submitted: The date the STD-126 was submitted to the DSHS Central Office.
D. Date Assigned: The date assigned to the staff member for investigation.
E. Surveillance Site: Enter the surveillance site that is completing the investigation.
F. Reporting County: Enter the reporting county that is completing the investigation.
G. Reporting City: Enter the reporting city that is completing the investigation.
H. DIS Name: Enter the DIS name or Surveillance staff person who completed the congenital investigation.

Mother's Information



1. **Mother's Name:** last name, first name and middle initial of the mother
2. **Social Security Number:** the social security number of the mother (optional)
3. **Date of Birth**: date the mother was born
4. **Chart/Medical Record Number:** number assigned to the mother's medical record at hospital or provider
5. **Mother's Home Address:** reported home address
6. **Mother's Residency:** mother's reported residency during pregnancy- ascertain if mother resided in Texas for the duration of her pregnancy
7. **Race:** mother's self-reported race. If mother is multi-racial, select other and enter select reported races.
8. **Ethnicity:** mother's self-reported ethnicity
9. **Marital Status:** mother's reported marital status
10. **Prenatal Care Provider:** information for the provider who conducted prenatal care for the mother. If no prenatal care was received, write N/A.
11. **Delivering Hospital/Physician:** information for the facility or provider that delivered the infant
12. **Last Menstrual Period:** time when the last menstrual period started. This will assist in determining the approximate gestational age of the infant
13. **Mother's OB History**:
    a. *Gravida:* number of times a mother has been pregnant
    b. *Para:* number of deliveries >20 weeks, including stillbirths. Multiple births such as triplets only count once
    c. *Abortus:* number pregnancies lost, including induced. Stillbirths (greater than 20 weeks) do not count in this category
14. **Substance Use:** If a toxicology screen was performed or the mother disclosed during to a DIS substance use, indicate which substance(s) were used during pregnancy. If other substance(s) are noted in the medical chart or interview record, please list them under "other".
15. **Clinical stage of syphilis:** the stage of syphilis as determined during the current pregnancy.

16. **Surveillance stage of syphilis:** the stage of syphilis as is determined by public health follow-up or surveillance staff. Serofast cases are considered non-infected.
17. **Trimesters received care:** mark all of the trimesters the mother received prenatal care
18. **First Prenatal Visit:** date when the mother had her first prenatal visit and indicate the date care was initiated
19. **Number of Prenatal Visits:** indicate the number of prenatal visits mother had
20. **Mother's HIV status during pregnancy:** reported HIV status of the mother and the date of the *most* recent test.
21. **Mother's Insurance Status During Pregnancy:** select the mother's insurance status *during* pregnancy. If mother was uninsured at the time of delivery, select none
22. **When mother had syphilis testing:** this will determine when the mother had prenatal syphilis testing during her pregnancy. The mother should have test results from her first prenatal visit (required by law). It does not matter when she presented for prenatal care. If the mother first presents for care in the third trimester, she should be tested at that first visit, which may be at her 28-32 weeks gestation (required by law). Indicate the dates of each test.
23. **Other Medical Conditions:** this is free text field to indicate other pertinent medical conditions that may have impacted the mother's pregnancy (eg. Gestational diabetes)

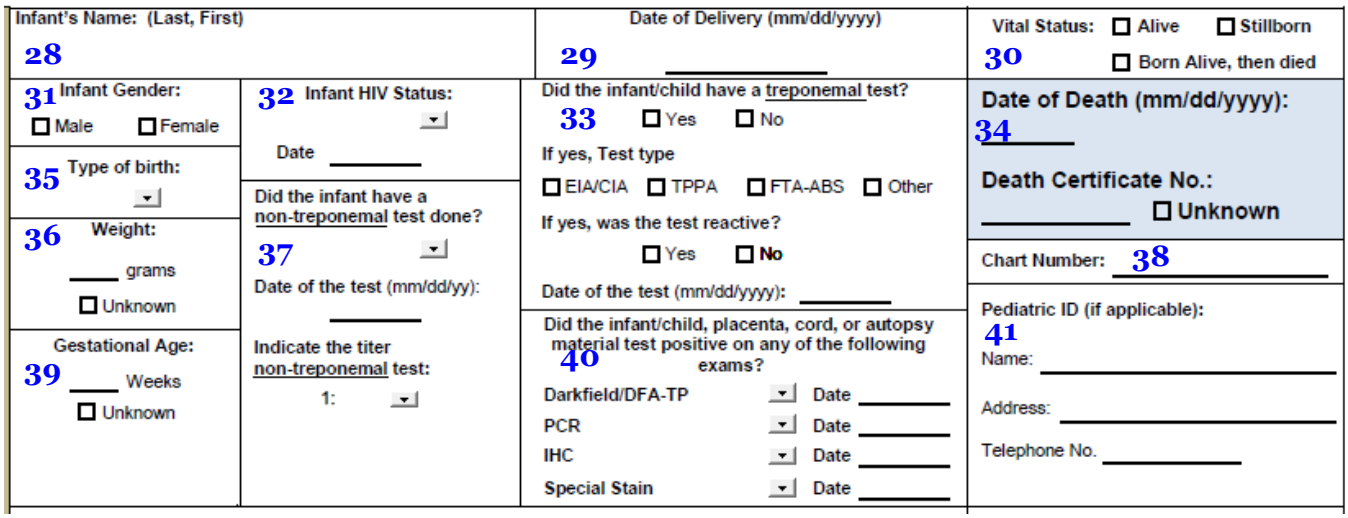


24. **Non-Treponemal History:** mother's testing history using non-treponemal testing to identify potential syphilis infection. Please note that if mother is considered to be serofast, use the diagnosing lab titer associated with the mother's morbidity.
25. **Treponemal History:** mother's testing history using treponemal testing to confirm potential syphilis infection. Please note that if mother is considered to be serofast, use the diagnosing lab lab associated with the mother's morbidity **or** any known previous positive treponemal test.
26. **Mother's Treatment History:** indicate when the mother received treatment for syphilis diagnosis(es). If Mother received multiple treatments (eg Bicillin 2.4 MU x3), indicate the date of treatment given

    example: Bicillin 2.4 MU 1/1/2019, Bicillin 2.4 MU 1/8/2019, Bicillin 2.4 MU 1/15/2019

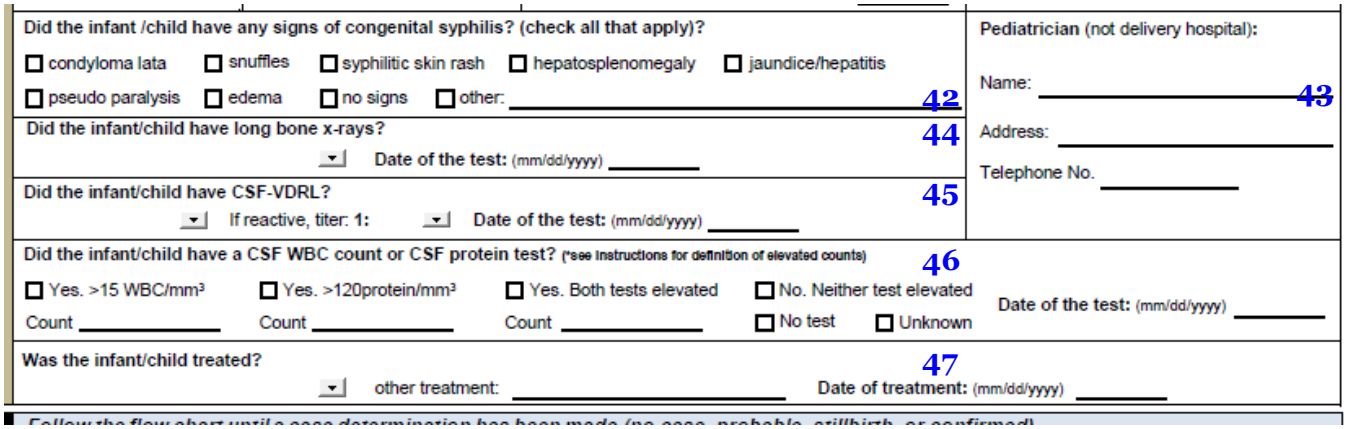
27. **Titer Response:**
    a. **Titer decreased:** select this option if the mother had an appropriate four-fold or more decrease in titer.
    b. **Titer remained steady:** select this option if the mother's titer remained the same following treatment (most often seen when a diagnosing titer is low).
    c. **Titer fluctuated, but remained within one dilution**: select this option when the mother's titer increased two-fold at any point following treatment, but returned to normal (serofast titer).
    d. **Titer fluctuated, but more than one dilution increase without treatment or follow-up**: select this option when the mother's titer increased four-fold or more at any point following treatment and no public health follow-up was conducted (labs drawn and/or treatment given) to determine possible re-infection status.
    e. **Titer fluctuated more than one dilution, but with follow-up returned within normal limits:** select this option when the mother's titer increased four-fold or more at any point following treatment and public health follow-up labs were drawn within three weeks of rise in titer and titer returned to "normal" (serofast titer) without treatment.
    f. **Titer showed evidence of treatment failure or reinfection:** select this option if the mother received public health follow-up following a titer increase of four-fold or more following initial diagnosis and treatment and was found to be a new case of syphilis.
    g. **Not enough time to evaluate titer change:** select this option if the mother was treated late in pregnancy and there was not adequate time for the titer to change.

Infant Information



28. **Infant's Name:** enter the infant's full name, last name first
29. **Date of Delivery:** enter the date the infant was delivered, this should be consistent with the infant's date of birth
30. **Vital Status:** enter the vital status of the infant at the time that report is submitted
31. **Infant Gender:** enter the gender at birth- this field must be completed
32. **Infant HIV Status:** enter in the HIV status of the infant at the time this form was being filled out. Indeterminate status is for infants whose status has not been clearly identified; if no test was performed or records or not available, choose no test performed/unknown.
33. **Treponemal testing:** enter in the treponemal test results for the infant- if a test was performed, enter the date the lab was drawn.
34. **Date of Death:** this item should be filled out only if the infant was stillborn or died after birth
35. **Type of Birth:** notate if this was a single birth (singleton), twins
36. **Birth weight:** enter the birth weight of the infant in grams. Normal birth weight can be from 2500 grams to 3,999 grams.
37. **Non-Treponemal Testing**: enter in the non-treponemal test results for the infant. If the infant was stillborn, this item may be left blank.
38. **Chart Number**: number assigned to the infant of child's medical record at hospital or provider
39. **Gestational Age:** enter the approximate gestational age of the infant in weeks. If the gestational age is a fraction (e.g. – 37 2/7), round to the nearest whole number.
40. **Placenta, cord, or autopsy tests for spirochetes**:
    a. **Darkfield/DFA-TP:** this is a special test looking specifically for T. pallidum.
    b. **Infant Polymerase Chain Reaction (PCR) or other equivalent direct molecular methods:** testing of specimens from lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material for the genetic markers of T. pallidum.
    c. **Immunohistochemistry (IHC):** testing of specimens from lesions, placenta, umbilical cord, or autopsy material, detecting for antigens through the use of antibodies specific for T. pallidum.
    d. **Special Stain (eg: silver staining):** testing of specimens, from lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material using a special stain, for the presence of spirochetes.

41. **Pediatric Infectious Disease Clinician:** enter all contact information for the consulting pediatric infectious disease clinician



42. **Signs of Congenital syphilis:** check all of the symptoms that apply.
43. **Pediatrician:** enter in all contact information for the pediatrician if known at the time of discharge.
44. **Long Bone X-Rays:** bone involvement is one sign of congenital syphilis. Enter whether or not a long bone x-ray was done, the result, and the date of the x-rays.
45. **CSF-VDRL:** enter whether or not the infant had a CSF-VDRL, the results, and the date of the test.
46. **CSF WBC or CSF protein test:** enter whether or not the infant had a CSF-WBC or protein test and what the results were. Cerebrospinal fluid (CSF) white blood cell (WBC) count and protein vary with gestational age. During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal. After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl is abnormal, regardless of CSF serology (from CDC instructions).
47. **Infant treatment:** mark what type of treatment the infant received. If the begins one type of treatment, but does not complete the therapy, please indicate in the "Additional comments" and select "other". Please use the standard dosing and not the exact dosage when entering "other" treatments.

TEXAS Health and Human Services
Texas Department of State Health Services

Texas Department of State Health Services
HIV/STD/TB/Viral Hepatitis Prevention and Care Branch
STD-126 Syphilis Infant Reactor Control Record

Unique Identifier/Control Number	Date Reported to Health Dept. (mm/dd/yyyy)	Date Morb Card Submitted (mm/dd/yyyy)	Date Assigned (mm/dd/yyyy)
- -			

Surveillance Site	Reporting State	Reporting County	Reporting City	DIS Name
	48			

MOTHER INFORMATION

Mother's Name: (Last, First, MI)

Social Security Number | **Date of Birth** (mm/dd/yyyy)

Chart/Medical Record Number

Mother's Home Address and Phone
Street Address: _____
City: _____ Phone: _____
State: ___ Zip Code: _____ Alt: _____

Did mother reside outside Texas during pregnancy?
If yes, when: _____
If yes, where: _____

Race
If other, describe: _____

Ethnicity
☐ Hisp/Latino ☐ Non-Hisp/Non-Latino ☐ Unknown

Marital Status

Prenatal Care Provider:
Name: _____
Address: _____
Telephone No. _____

Delivering Hospital/Physician
Hospital: _____
Physician: _____
Address: _____
Telephone No. _____

Last Menstrual Period (mm/dd/yyyy)
_____ ☐ Unknown

Mother's OB History (including this birth)
G ___ P ___ A ___

Substance use (UDS or Tox screen result)
☐ Alcohol ☐ Amphetamines ☐ Barbituates
☐ Benzodiazepines ☐ Cocaine ☐ Heroin
☐ Marijuana (THC) ☐ Methadone ☐ Morphine
☐ Oxycodone ☐ None ☐ Unk/not performed
If other, list: _____

What was mother's **clinical** stage of syphilis during this pregnancy?

What was mother's **surveillance** stage of syphilis during her pregnancy?

Indicate ***ALL*** trimesters the mother received care (check all that apply):
☐ None ☐ First ☐ Second ☐ Third ☐ Unk

First prenatal visit: (mm/dd/yyyy)
_____ ☐ None ☐ Unknown

Number of prenatal visits: ___

Mother's last known HIV Status:
☐ Positive ☐ Negative ☐ Equivocal
☐ Not Tested ☐ Unknown Date: _____

Mother's insurance status during this pregnancy

Indicate when mother had syphilis testing during the following:

First Prenatal*	**3rd Trimester (28-32 wks gestation)***	***Delivery***
☐ Yes ☐ No ☐ Unk	☐ Yes ☐ No ☐ Unk	☐ Yes ☐ No ☐ Unk
Date: _____	Date: _____	Date: _____

****required by Texas Health and Safety Code 81.090***

Other medical conditions

Non-Treponemal History

Indicate during pregnancy and delivery, dates and results of tests:

Date (mm/dd/yyyy)	No test	Test Type			Results		Titer
Testing at Labor and Delivery	☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
Third Trimester Test	☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
First test during pregnancy	☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:
Any known test prior to pregnancy	☐	☐ RPR	☐ VDRL	☐ Other	☐ Reactive	☐ Non-Reactive	1:

Treponemal History

Indicate during pregnancy and delivery, dates and results of tests:

Date (mm/dd/yyyy)		Test Type		Results	
Testing at Labor and Delivery	_____ ☐ **No test performed**	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
Third Trimester Test	_____ ☐ **No test performed**	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
First test during pregnancy	_____ ☐ **No test performed**	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive
Any known test prior to pregnancy if MOB had a previous syphilis diagnosis, please use the diagnosing lab	_____ ☐ **No test performed**	☐ EIA or CIA ☐ TPPA ☐ FTA-ABS	☐ Syphilis Healthcheck ☐ Other	☐ Reactive	☐ Non-Reactive

Treatment History

What was the mother's treatment?

Date
_____
_____
_____
_____
_____
_____
_____
_____

Following adequate treatment for mother's surveillance stage:
☐ **Titer decreased**
☐ **Titer remained steady**
☐ **Titer fluctuated, but remained within one dilution**
☐ **Titer fluctuated, but more than one dilution increase without treatment or follow-up**
☐ **Titer fluctuated more than one dilution, but with follow-up returned within normal limits**
☐ **Titer showed evidence of treatment failure of reinfection**
☐ **Not enough time to evaluate titer change**

TEXAS Health and Human Services
Texas Department of State Health Services

Texas Department of State Health Services
HIV/STD/TB/Viral Hepatitis Prevention and Care Branch
STD-126 Syphilis Infant Reactor Control Record

INFANT INFORMATION

Infant's Name: (Last, First)

Date of Delivery (mm/dd/yyyy) _____

Vital Status: ☐ Alive ☐ Stillborn ☐ Born Alive, then died

Infant Gender: ☐ Male ☐ Female

Type of birth:

Weight: _____ grams ☐ Unknown

Gestational Age: _____ Weeks ☐ Unknown

Infant HIV Status:

Date _____

Did the infant have a non-treponemal test done?

Date of the test (mm/dd/yy): _____

Indicate the titer non-treponemal test:

1:

Did the infant/child have a treponemal test? ☐ Yes ☐ No

If yes, Test type ☐ EIA/CIA ☐ TPPA ☐ FTA-ABS ☐ Other

If yes, was the test reactive? ☐ Yes ☐ No

Date of the test (mm/dd/yyyy): _____

Did the infant/child, placenta, cord, or autopsy material test positive on any of the following exams?

Darkfield/DFA-TP	**Date** _____
PCR	**Date** _____
IHC	**Date** _____
Special Stain	**Date** _____

Date of Death (mm/dd/yyyy): _____

Death Certificate No.: _____ ☐ Unknown

Chart Number: _____

Pediatric ID (if applicable):

Name: _____

Address: _____

Telephone No. _____

Did the infant /child have any signs of congenital syphilis? (check all that apply)?

☐ condyloma lata ☐ snuffles ☐ syphilitic skin rash ☐ hepatosplenomegaly ☐ jaundice/hepatitis

☐ pseudo paralysis ☐ edema ☐ no signs ☐ other: _____

Did the infant/child have long bone x-rays?

Date of the test: (mm/dd/yyyy) _____

Did the infant/child have CSF-VDRL?

If reactive, titer: **1:** **Date of the test:** (mm/dd/yyyy) _____

Pediatrician (not delivery hospital)**:**

Name: _____

Address: _____

Telephone No. _____

Did the infant/child have a CSF WBC count or CSF protein test? **(*see instructions for definition of elevated counts)**

☐ Yes. >15 WBC/mm^3 Count _____ ☐ Yes. >120protein/mm^3 Count _____ ☐ Yes. Both tests elevated Count _____ ☐ No. Neither test elevated ☐ No test ☐ Unknown

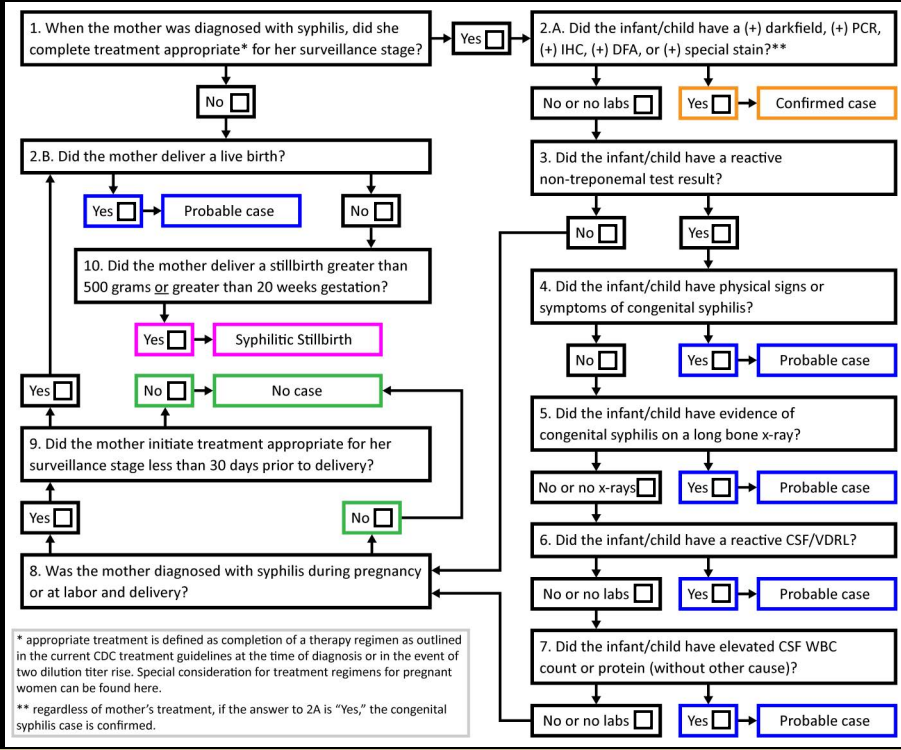
Date of the test: (mm/dd/yyyy) _____

Was the infant/child treated?

other treatment: _____ **Date of treatment:** (mm/dd/yyyy) _____

CASE DETERMINATION

Follow the flow chart until a case determination has been made (no case, probable, stillbirth, or confirmed).



* appropriate treatment is defined as completion of a therapy regimen as outlined in the current CDC treatment guidelines at the time of diagnosis or in the event of two dilution titer rise. Special consideration for treatment regimens for pregnant women can be found here.

** regardless of mother's treatment, if the answer to 2A is "Yes," the congenital syphilis case is confirmed.

☐ ***NO CASE***

☐ ***PROBABLE CASE***

☐ ***SYPHILITIC STILLBIRTH***

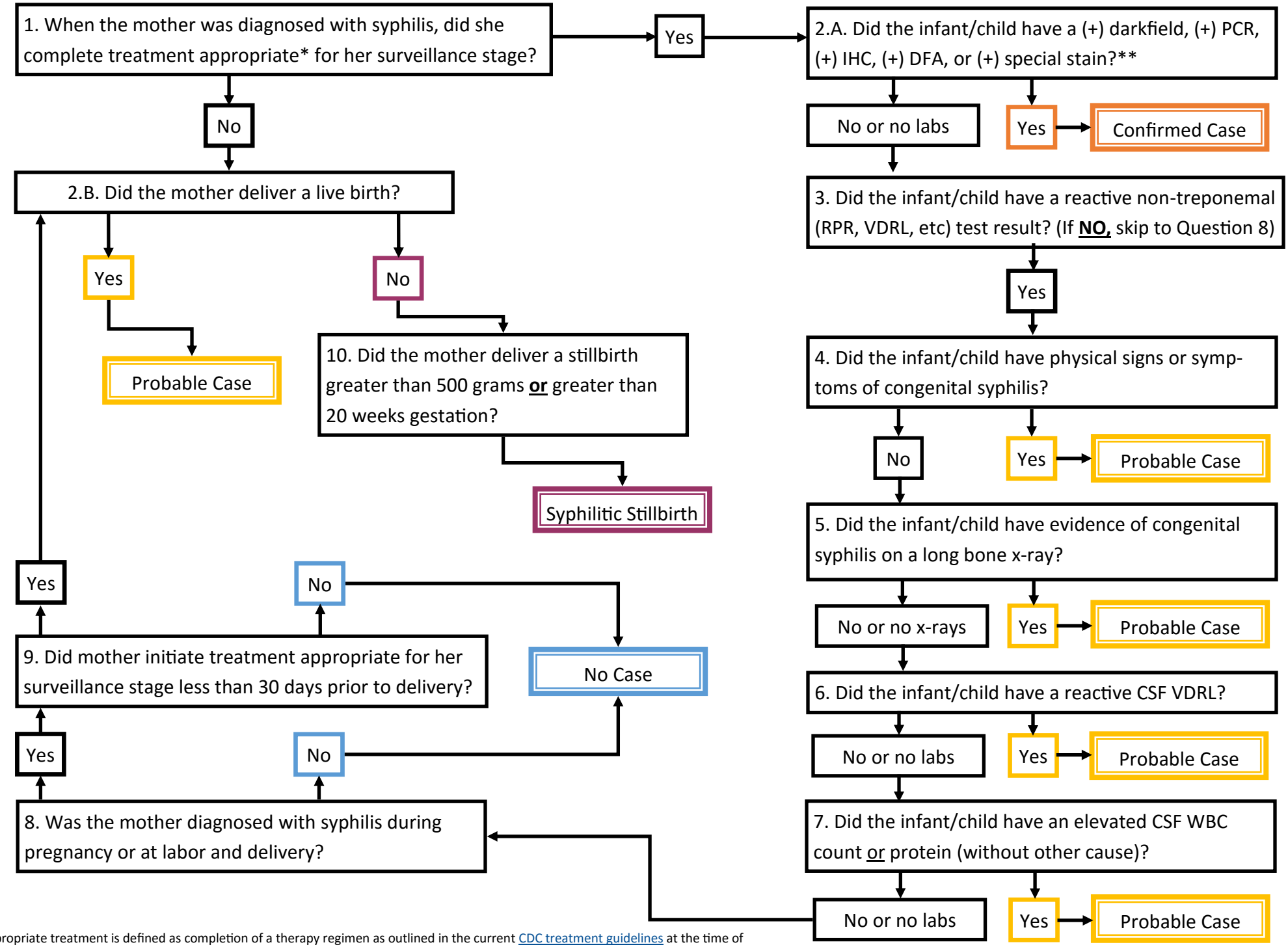
☐ ***CONFIRMED CASE***

Additional comments:

Supervisor's Approval

Approved by: _____ **Date:** _____

Congenital Syphilis Case Classification Flow Chart



*appropriate treatment is defined as completion of a therapy regimen as outlined in the current CDC treatment guidelines at the time of diagnosis or in the event of two dilution titer rise . Special consideration for treatment regimens for pregnant women can be found here.

**Regardless of Mother's treatment, if the answer to 2A is "Yes", the congenital syphilis case is confirmed.

CDC Congenital Syphilis Case Definition

Considerations when following this flow chart:

- If an infant has a reactive darkfield, polymerase chain reaction (PCR), immunohistochemistry (IHC), direct fluorescent antibodies (DFA), or special stain test that is reactive for *Treponema pallidum* then regardless of mother's treatment history or infant's serological findings this will be a **confirmed case.**
- If mother did not complete treatment appropriate to her surveillance stage of syphilis (verify surveillance stage upon congenital syphilis case report) **OR** initiated treatment less than 30 days prior to delivery and had a live birth- the infant will be classified as a **probable case.**
- For a **probable case** to occur based on clinical manifestations an infant must have a reactive non-treponemal test **AND**
    - ◊ Positive CSF VDRL **OR**
    - ◊ Elevated CSF WBC (without other cause): Elevated CSF WBC is defined as greater than 15 WBC/mm^3 for the first 30 days of life and greater than 5 WBC/mm^3 after the first 30 days of life **OR**
    - ◊ Elevated CSF protein (without other cause): Elevated CSF protein defined as greater than 120 mg/dl for the first 30 days of life and greater 40 mg/dl for after the first 30 days of life **OR**
    - ◊ Evidence of congenital syphilis on a long bone x-ray (bowing of the long bones) **OR**
    - ◊ Any one of the following clinical manifestations outlined on the flow chart (without other cause)
        - ♦ Common physical signs and symptoms of congenital syphilis in infants are:
            - ∗ Hepatosplenomegaly (enlarged liver and spleen)
            - ∗ Rash
            - ∗ condyloma lata
            - ∗ Snuffles (nasal discharge)
            - ∗ Jaundice (yellowing of the tissues)
            - ∗ Pseudoparalysis of the extremities
            - ∗ Edema (tissue swelling from excess fluid)
            - ∗ Nerve deafness
        - ♦ Common physical signs and symptoms of congenital syphilis in an older child are:
            - ∗ Ocular issues (cataracts, keratitis)
            - ∗ Nerve deafness
            - ∗ Dental issues (mulberry molars, Hutchinson teeth)
            - ∗ Facial and skin abnormalities (frontal bossing, saddle nose, rhagades)
            - ∗ Limb and extremities abnormalities (anterior bowing of the shins, Clutton joints)
- If a fetal demise occurred at greater than 500 grams **OR** roughly 20 weeks gestation or greater **AND** if mother did not complete treatment appropriate to her surveillance stage of syphilis (verify surveillance stage upon congenital syphilis case report) **OR** initiated treatment less than 30 days prior to delivery then the infant will be classified as a **congenital syphilis stillbirth.**

Additional Considerations: If mother is a documented biological false positive during the current pregnancy and a NR treponemal test is obtained from labor and delivery, no case report is needed. If mother has never met case criteria at the time of delivery, no case report is needed.

CSTE (NNDSS) Case definition

https://wwwn.cdc.gov/nndss/conditions/syphilis/case-definition/2018/

Congenital Syphilis

Clinical Description

A condition caused by infection in utero with *Treponema pallidum*. A wide spectrum of severity exists, from inapparent infection to severe cases that are clinically apparent at birth. An infant or child (aged less than 2 years) may have signs such as hepatosplenomegaly, rash, condyloma lata, snuffles, jaundice (nonviral hepatitis), pseudoparalysis, anemia, or edema (nephrotic syndrome and/or malnutrition). An older child may have stigmata (e.g., interstitial keratitis, nerve deafness, anterior bowing of shins, frontal bossing, mulberry molars, Hutchinson teeth, saddle nose, rhagades, or Clutton joints).

Laboratory Criteria for Diagnosis

Demonstration of *Treponema pallidum* by:

- Darkfield microscopy of lesions, body fluids, or neonatal nasal discharge, **OR**
- Polymerase chain reaction (PCR) or other equivalent direct molecular methods of lesions, neonatal nasal discharge, placenta, umbilical cord, or autopsy material, **OR**
- Immunohistochemistry (IHC), or special stains (e.g., silver staining) of specimens from lesions, placenta, umbilical cord, or autopsy material.

Case Classification

Probable

A condition affecting an infant whose mother had untreated or inadequately treated* syphilis at delivery, regardless of signs in the infant, **OR** an infant or child who has a reactive non-treponemal test for syphilis (Venereal Disease Research Laboratory [VDRL], rapid plasma reagin [RPR], **OR** equivalent serologic methods) **AND** any one of the following:

- Any evidence of congenital syphilis on physical examination (see Clinical description)
- Any evidence of congenital syphilis on radiographs of long bones
- A reactive cerebrospinal fluid (CSF) venereal disease research laboratory test (VDRL) test

- In a non-traumatic lumbar puncture, an elevated CSF leukocyte (white blood cell, WBC) count or protein (without other cause):
  - Suggested parameters for abnormal CSF WBC and protein values:

1. During the first 30 days of life, a CSF WBC count of >15 WBC/mm3 or a CSF protein >120 mg/dl is abnormal.
2. After the first 30 days of life, a CSF WBC count of >5 WBC/mm3 or a CSF protein >40 mg/dl, regardless of CSF serology.

The treating clinician should be consulted to interpret the CSF values for the specific patient.

*Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.

Confirmed

A case that is laboratory confirmed.

Comments

Congenital and acquired syphilis may be difficult to distinguish when a child is seropositive after infancy. Signs of congenital syphilis may not be obvious, and stigmata may not yet have developed. Abnormal values for CSF VDRL, WBC count, and protein may be found in either congenital or acquired syphilis. Findings on radiographs of long bones may help because radiographic changes in the metaphysis and epiphysis are considered classic signs of congenitally acquired syphilis. While maternal antibodies can complicate interpretation of serologic tests in an infant, reactive tests past 18 months of age are considered to reflect the status of the child. The decision may ultimately be based on maternal history and clinical judgment. In a young child, the possibility of sexual abuse should be considered as a cause of acquired rather than congenital syphilis, depending on the clinical picture. For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths.

Syphilitic Stillbirth (

Clinical Description

A fetal death that occurs after a 20-week gestation or in which the fetus weighs greater than 500 g and the mother had untreated or inadequately treated* syphilis at delivery.

*Adequate treatment is defined as completion of a penicillin-based regimen, in accordance with CDC treatment guidelines, appropriate for stage of infection, initiated 30 or more days before delivery.

Comments

For reporting purposes, congenital syphilis includes cases of congenitally acquired syphilis among infants and children as well as syphilitic stillbirths

Congenital Syphilis

Effective prevention and detection of congenital syphilis depends on the identification of syphilis in pregnant women and, therefore, on the routine serologic screening of pregnant women during the first prenatal visit. Additional testing at 28 weeks' gestation and again at delivery is warranted for women who are at increased risk or live in communities with increased prevalence of syphilis infection (*442*,*450*). Moreover, as part of the management of pregnant women who have syphilis, information concerning ongoing risk behaviors and treatment of sex partners should be obtained to assess the risk for reinfection. Routine screening of newborn sera or umbilical cord blood is not recommended, as diagnosis at this time does not prevent symptomatic congenital syphilis in some newborns. No mother or newborn infant should leave the hospital without maternal serologic status having been documented at least once during pregnancy, and preferably again at delivery if at risk.

Evaluation and Treatment of Neonates (Infants Aged <30 Days)

The diagnosis of congenital syphilis can be difficult, as maternal nontreponemal and treponemal IgG antibodies can be transferred through the placenta to the fetus, complicating the interpretation of reactive serologic tests for syphilis in neonates. Therefore, treatment decisions frequently must be made on the basis of 1) identification of syphilis in the mother; 2) adequacy of maternal treatment; 3) presence of clinical, laboratory, or radiographic evidence of syphilis in the neonate; and 4) comparison of maternal (at delivery) and neonatal nontreponemal serologic titers using the same test, preferably conducted by the same laboratory. Any neonate at risk for congenital syphilis should receive a full evaluation and testing for HIV infection.

All neonates born to mothers who have reactive nontreponemal and treponemal test results should be evaluated with a quantitative nontreponemal serologic test (RPR or VDRL) performed on the neonate's serum, because umbilical cord blood can become contaminated with maternal blood and yield a false-positive result, and Wharton's jelly within the umbilical cord can yield a false-negative result. Conducting a treponemal test (i.e., TP-PA, FTA-ABS, EIA, or CIA) on neonatal serum is not recommended because it is difficult to interpret. No commercially available immunoglobulin (IgM) test can be recommended.

https://www.cdc.gov/std/tg2015/congenital.htm

All neonates born to women who have reactive serologic tests for syphilis should be examined thoroughly for evidence of congenital syphilis (e.g., nonimmune hydrops, jaundice, hepatosplenomegaly, rhinitis, skin rash, and pseudoparalysis of an extremity). Pathologic examination of the placenta or umbilical cord using specific staining (e.g., silver) or a *T. pallidum* PCR test using a CLIA-validated test should be considered; DFA-TP reagents are not available. Darkfield microscopic examination or PCR testing of suspicious lesions or body fluids (e.g., bullous rash and nasal discharge) also should be performed. In addition to these tests, for stillborn infants, skeletal survey demonstrating typical osseous lesions might aid in the diagnosis of congenital syphilis.

The following scenarios describe the congenital syphilis evaluation and treatment of neonates born to women who have reactive serologic tests for syphilis during pregnancy. Maternal history of infection with *T. pallidum* and treatment for syphilis must be considered when evaluating and treating the neonate for congenital syphilis in most scenarios, except when congenital syphilis is proven or highly probable (See Scenario 1).

Scenario 1: Proven or highly probable congenital syphilis

Any neonate with:

1. an abnormal physical examination that is consistent with congenital syphilis;
   OR
2. a serum quantitative nontreponemal serologic titer that is fourfold higher than the mother's titer;[1]
   OR
3. a positive darkfield test or PCR of lesions or body fluid(s).

[1] The absence of a fourfold or greater titer for a neonate does not exclude congenital syphilis.

Recommended Evaluation

- CSF analysis for VDRL, cell count, and protein **
- Complete blood count (CBC) and differential and platelet count

- Other tests as clinically indicated (e.g., long-bone radiographs, chest radiograph, liver-function tests, neuroimaging, ophthalmologic examination, and auditory brain stem response).

**CSF test results obtained during the neonatal period can be difficult to interpret; normal values differ by gestational age and are higher in preterm infants. Values as high as 25 white blood cells (WBCs) /mm3 and/or protein of 150 mg/dL might occur among normal neonates; lower values (i.e., 5 WBCs/mm3 and protein of 40 mg/dL) might be considered the upper limits of normal. Other causes of elevated values should be considered when an infant is being evaluated for congenital syphilis.

Recommended Regimens

- **Aqueous crystalline penicillin G** 100,000–150,000 units/kg/day, administered as 50,000 units/kg/dose IV every 12 hours during the first 7 days of life and every 8 hours thereafter for a total of 10 days
  OR
- **Procaine penicillin G** 50,000 units/kg/dose IM in a single daily dose for 10 days

If more than 1 day of therapy is missed, the entire course should be restarted. Data are insufficient regarding the use of other antimicrobial agents (e.g., ampicillin). When possible, a full 10-day course of penicillin is preferred, even if ampicillin was initially provided for possible sepsis. The use of agents other than penicillin requires close serologic follow-up to assess adequacy of therapy.

Scenario 2: Possible Congenital Syphilis

Any neonate who has a normal physical examination and a serum quantitative nontreponemal serologic titer equal to or less than fourfold the maternal titer and one of the following:

1. mother was not treated, inadequately treated, or has no documentation of having received treatment;
   OR
2. mother was treated with erythromycin or a regimen other than those recommended in these guidelines (i.e., a nonpenicillin G regimen);††
   OR

https://www.cdc.gov/std/tg2015/congenital.htm

3. mother received recommended treatment <4 weeks before delivery.

[††] A women treated with a regimen other than recommended in these guidelines should be considered untreated.

Recommended Evaluation

- CSF analysis for VDRL, cell count, and protein**
- CBC, differential, and platelet count
- Long-bone radiographs

A complete evaluation is not necessary if 10 days of parenteral therapy is administered, although such evaluations might be useful. For instance, a lumbar puncture might document CSF abnormalities that would prompt close follow-up. Other tests (e.g., CBC, platelet count, and bone radiographs) can be performed to further support a diagnosis of congenital syphilis.

[**]CSF test results obtained during the neonatal period can be difficult to interpret; normal values differ by gestational age and are higher in preterm infants. Values as high as 25 white blood cells (WBCs) /mm3 and/or protein of 150 mg/dL might occur among normal neonates; lower values (i.e., 5 WBCs/mm3 and protein of 40 mg/dL) might be considered the upper limits of normal. Other causes of elevated values should be considered when an infant is being evaluated for congenital syphilis.

Recommended Regimens

- **Aqueous crystalline penicillin G** 100,000–150,000 units/kg/day, administered as 50,000 units/kg/dose IV every 12 hours during the first 7 days of life and every 8 hours thereafter for a total of 10 days
  OR
- **Procaine penicillin G** 50,000 units/kg/dose IM in a single daily dose for 10 days
  OR
- **Benzathine penicillin G** 50,000 units/kg/dose IM in a single dose

Before using the single-dose benzathine penicillin G regimen, the complete evaluation (i.e., CSF examination, long-bone radiographs, and CBC with platelets) must be normal, and follow-up must be certain. If any part of the infant's evaluation is abnormal or not performed, if the CSF analysis is uninterpretable

https://www.cdc.gov/std/tg2015/congenital.htm

because of contamination with blood, or if follow-up is uncertain, a 10-day course of penicillin G is required. If the neonate's nontreponemal test is nonreactive and the provider determines that the mother's risk of untreated syphilis is low, treatment of the neonate with a single IM dose of benzathine penicillin G 50,000 units/kg for possible incubating syphilis can be considered without an evaluation.

Neonates born to mothers with untreated early syphilis at the time of delivery are at increased risk for congenital syphilis, and the 10-day course of penicillin G may be considered even if the complete evaluation is normal and follow-up is certain.

Scenario 3: Congenital Syphilis less likely

Any neonate who has a normal physical examination and a serum quantitative nontreponemal serologic titer equal to or less than fourfold the maternal titer and both of the following are true:

1. mother was treated during pregnancy, treatment was appropriate for the stage of infection, and treatment was administered >4 weeks before delivery and
2. mother has no evidence of reinfection or relapse.

Recommended Evaluation

No evaluation is recommended.

Recommended Regimen

- **Benzathine penicillin G** 50,000 units/kg/dose IM in a single dose*

*****Another approach involves not treating the infant, but rather providing close serologic follow-up every 2-3 months for 6 months for infants whose mother's nontreponemal titers decreased at least fourfold after appropriate therapy for early syphilis or remained stable for low-titer, latent syphilis (e.g., VDRL <1:2; RPR <1:4).

Scenario 4: Congenital Syphilis unlikely

Any neonate who has a normal physical examination and a serum quantitative nontreponemal serologic titer equal to or less than fourfold the maternal titer and both of the following are true:

https://www.cdc.gov/std/tg2015/congenital.htm

1. mother's treatment was adequate before pregnancy and
2. mother's nontreponemal serologic titer remained low and stable (i.e., serofast) before and during pregnancy and at delivery (VDRL <1:2; RPR <1:4).

Recommended Evaluation

No evaluation is recommended.

Recommended Regimen

No treatment is required, but infants with reactive nontreponemal tests should be followed serologically to ensure the nontreponemal test returns to negative (see Follow-Up). Benzathine penicillin G 50,000 units/kg as a single IM injection might be considered, particularly if follow-up is uncertain and the neonate has a reactive nontreponemal test.

Follow-Up

All neonates with reactive nontreponemal tests should receive careful follow-up examinations and serologic testing (i.e., a nontreponemal test) every 2–3 months until the test becomes nonreactive. In the neonate who was not treated because congenital syphilis was considered less likely or unlikely, nontreponemal antibody titers should decline by age 3 months and be nonreactive by age 6 months, indicating that the reactive test result was caused by passive transfer of maternal IgG antibody. At 6 months, if the nontreponemal test is nonreactive, no further evaluation or treatment is needed; if the nontreponemal test is still reactive, the infant is likely to be infected and should be treated. Treated neonates that exhibit persistent nontreponemal test titers by 6–12 months should be re-evaluated through CSF examination and managed in consultation with an expert. Retreatment with a 10-day course of a penicillin G regimen may be indicated. Neonates with a negative nontreponemal test at birth and whose mothers were seroreactive at delivery should be retested at 3 months to rule out serologically negative incubating congenital syphilis at the time of birth. Treponemal tests should not be used to evaluate treatment response because the results are qualitative and passive transfer of maternal IgG treponemal antibody might persist for at least 15 months.

Neonates whose initial CSF evaluations are abnormal should undergo a repeat lumbar puncture approximately every 6 months until the results are normal. A

reactive CSF Venereal Disease Research Laboratory (VDRL) test or abnormal CSF indices that persist and cannot be attributed to other ongoing illness requires retreatment for possible neurosyphilis and should be managed in consultation with an expert.

Special Considerations

Penicillin Allergy

Infants and children who require treatment for congenital syphilis but who have a history of penicillin allergy or develop an allergic reaction presumed secondary to penicillin should be desensitized and then treated with penicillin (see Management of Persons with a History of Penicillin Allergy). Skin testing remains unavailable for infants and children because the procedure has not been standardized for this age group. Data are insufficient regarding the use of other antimicrobial agents (e.g., ceftriaxone) for congenital syphilis in infants and children. If a nonpenicillin G agent is used, close clinical, serologic, and CSF follow-up is required in consultation with an expert.

Penicillin Shortage

During periods when the availability of aqueous crystalline penicillin G is compromised, the following is recommended.

1. For neonates with clinical evidence of congenital syphilis (Scenario 1), check local sources for aqueous crystalline penicillin G (potassium or sodium). If IV penicillin G is limited, substitute some or all daily doses with procaine penicillin G (50,000 U/kg/dose IM a day in a single daily dose for 10 days).

If aqueous or procaine penicillin G is not available, ceftriaxone (in doses appropriate for birthweight) can be considered with careful clinical and serologic follow-up and in consultation with an expert, as evidence is insufficient to support the use of ceftriaxone for the treatment of congenital syphilis. Management might include a repeat CSF examination at age 6 months if the initial examination was abnormal. Ceftriaxone must be used with caution in infants with jaundice.

2. For neonates without any clinical evidence of congenital syphilis (Scenario 2 and Scenario 3), use

a. procaine penicillin G, 50,000 U/kg/dose IM a day in a single dose for 10 days

or

b. benzathine penicillin G, 50,000 U/kg IM as a single dose.

If any part of the evaluation for congenital syphilis is abnormal or was not performed, CSF examination is not interpretable, or follow-up is uncertain, procaine penicillin G is recommended. A single dose of ceftriaxone is inadequate therapy.

3. For premature infants who have no clinical evidence of congenital syphilis (Scenario 2 and Scenario 3) and might not tolerate IM injections because of decreased muscle mass, IV ceftriaxone can be considered with careful clinical and serologic follow-up and in consultation with an expert. Ceftriaxone dosing must be adjusted according to birthweight.

HIV Infection

Evidence is insufficient to determine whether neonates who have congenital syphilis and HIV or whose mothers have HIV infection require different therapy or clinical management than is recommended for all neonates. All neonates with congenital syphilis and HIV infection should be managed similarly as neonates with congenital syphilis who do not have HIV infection.

Evaluation and Treatment of Infants and Children with Congenital Syphilis

Infants and children aged ≥1 month who are identified as having reactive serologic tests for syphilis should be examined thoroughly and have maternal serology and records reviewed to assess whether they have congenital or acquired syphilis (see Primary and Secondary Syphilis and Latent Syphilis, Sexual Assault or Abuse of Children). Any infant or child at risk for congenital syphilis should receive a full evaluation and testing for HIV infection.

Recommended Evaluation

- CSF analysis for VDRL, cell count, and protein
- CBC, differential, and platelet count

https://www.cdc.gov/std/tg2015/congenital.htm

- Other tests as clinically indicated (e.g., long-bone radiographs, chest radiograph, liver function tests, abdominal ultrasound, ophthalmologic examination, neuroimaging, and auditory brain-stem response)

Recommended Regimen

- **Aqueous crystalline penicillin G** 200,000–300,000 units/kg/day IV, administered as 50,000 units/kg every 4–6 hours for 10 days

If the infant or child has no clinical manifestations of congenital syphilis and the evaluation (including the CSF examination) is normal, treatment with up to 3 weekly doses of benzathine penicillin G, 50,000 U/kg IM can be considered. A single dose of benzathine penicillin G 50,000 units/kg IM up to the adult dose of 2.4 million units in a single dose can be considered after the 10-day course of IV aqueous penicillin to provide more comparable duration of treatment in those who have no clinical manifestations and normal CSF. All of the above treatment regimens also would be adequate for children who might have other treponemal infections.

Follow-Up

Careful follow-up examinations and serologic testing (i.e., a nontreponemal test) of infants and children treated for congenital syphilis after the neonatal period (30 days of age) should be performed every 3 months until the test becomes nonreactive or the titer has decreased fourfold. The serologic response after therapy might be slower for infants and children than neonates. If these titers increase at any point for more than 2 weeks or do not decrease fourfold after 12–18 months, the infant or child should be evaluated (e.g., through CSF examination), treated with a 10-day course of parenteral penicillin G, and managed in consultation with an expert. Treponemal tests should not be used to evaluate treatment response, because the results are qualitative and persist after treatment; further, passive transfer of maternal IgG treponemal antibody might persist for at least 15 months after delivery.

Infants or children whose initial CSF evaluations are abnormal should undergo a repeat lumbar puncture approximately every 6 months until the results are normal. After 2 years of follow-up, a reactive CSF VDRL test or abnormal CSF indices that persists and cannot be attributed to other ongoing illness requires

retreatment for possible neurosyphilis and should be managed in consultation with an expert.

Special Considerations

Penicillin Allergy

Infants and children who require treatment for congenital syphilis but who have a history of penicillin allergy or develop an allergic reaction presumed secondary to penicillin should be desensitized and treated with penicillin (see Management of Persons with a History of Penicillin Allergy). Skin testing remains unavailable for infants and children because the procedure has not been standardized for this age group. Data are insufficient regarding the use of other antimicrobial agents (e.g., ceftriaxone) for congenital syphilis in infants and children. If a nonpenicillin G agent is used, close clinical, serologic, and CSF follow-up is required in consultation with an expert.

Penicillin Shortage

During periods when the availability of penicillin G is compromised, management options are similar to options for the neonate (see Evaluation and treatment of infants during the first month of life).

1. For infants and children with clinical evidence of congenital syphilis, procaine penicillin G (50,000 U/kg/dose IM up to the adult dose of 2.4 million units a day in a single daily dose for 10 days) is recommended. A single dose of benzathine penicillin G 50,000 units/kg IM up to the adult dose of 2.4 million units in a single dose can be considered after the 10-day course of procaine penicillin. If procaine or benzathine penicillin G is not available, ceftriaxone (in doses appropriate for age and weight) can be considered with careful clinical and serologic follow-up. Infants and children receiving ceftriaxone should be managed in consultation with an expert, as evidence is insufficient to support the use of ceftriaxone for the treatment of congenital syphilis in infants or children. For infants aged ≥30 days, use 75 mg/kg IV/IM of ceftriaxone a day in a single daily dose for 10–14 days (dose adjustment might be necessary based on current weight). For children, the dose should be 100 mg/kg of ceftriaxone a day in a single daily dose.

2. For infants and children without any clinical evidence of infection (see Scenario 2 and Scenario 3), use

a. procaine penicillin G, 50,000 U/kg/dose IM a day in a single dose for 10 days

or

b. benzathine penicillin G, 50,000 U/kg IM as a single dose.

If any part of the evaluation for congenital syphilis is abnormal or not performed, CSF examination is not interpretable, or follow-up is uncertain, procaine penicillin G is recommended.

HIV Infection

Evidence is insufficient to determine whether infants and children who have congenital syphilis and HIV or whose mothers have HIV infection require different therapy or clinical management than is recommended for all infants and children. All infants and children with congenital syphilis and HIV infection should be managed like infants and children without HIV infection.

TEXAS Health and Human Services
Texas Department of State Health Services
John Hellerstedt, M.D.
Commissioner

Congenital Syphilis Health Advisory
October 3, 2019

Summary
Reported syphilis cases are increasing nationally and in Texas.
- Reported congenital syphilis (CS) cases are also increasing.
- In Texas, 367 cases of CS were reported in 2018, which includes confirmed and probable (suspected) cases, as well as syphilitic stillbirths.

New state legislation was enacted on September 1, 2019 to increase syphilis testing in pregnant women. Testing is now mandated:
- At first prenatal care examination
- During third trimester (no earlier than 28 weeks gestation)
- At delivery

Texas healthcare providers are urged to:
- Screen all pregnant women for syphilis according to new testing requirements.
- Look for clinical signs/symptoms of syphilis in all patients.
- Treat patients with evidence of syphilis or recent exposure to syphilis on-site when possible. Document stage of syphilis and treatment administered.
- Report syphilis cases to your local or regional health department at the time of diagnosis. Include pregnancy status and treatment in the report.
- Test and evaluate newborns potentially exposed to syphilis *in utero*.
- Update electronic health record/electronic medical record systems to reflect new testing requirements.

Background
Syphilis cases have been increasing in men and women nationally, including women of childbearing age. Untreated syphilis during pregnancy can result in devastating health outcomes for the baby, including stillbirth or perinatal death, but congenital syphilis can be prevented by timely treatment of maternal syphilis.

In 2018, Texas saw increased cases of syphilis in women of childbearing age and of CS. In Texas, the number of CS cases increased 124% between 2017 (164 cases) and 2018 (367 cases). This is largest number of CS cases reported annually in Texas in more than 20 years and includes 352 probable cases, 2 confirmed cases, and 13 cases of syphilitic stillbirth.

New Legislation
As of September 1, 2019, Texas Health and Safety Code §81.090 mandates syphilis screening:

- At first prenatal care examination
- During third trimester (no earlier than 28 weeks gestation)
- At delivery

This represents a change from previous testing requirements, which mandated syphilis testing two times during pregnancy: at the first prenatal care examination and again during the third trimester.

Recommendations for Healthcare Providers

Screen all pregnant women for syphilis at the first prenatal encounter, during the third trimester (no earlier than 28 weeks gestation), and at delivery.

Evaluate for clinical signs/symptoms and laboratory evidence of syphilis. (Signs/symptoms of syphilis are summarized in table 1 below.)

- Look for clinical manifestations of early syphilis, which include:
  - Chancre, which typically presents as a painless ulcer with raised margin and non-purulent base, often near the anus, genitalia, or mouth
  - Bilateral rash on palms/soles
  - Generalized body rash of any type, often on the trunk
  - Condyloma lata, presenting as large, raised, gray or white lesions on moist, warm areas of the body
- Order serologic tests for syphilis.
- Review syphilis test results in the context of the patient's prior syphilis testing and treatment. If documentation of prior treatment is not available, contact your local or regional health department for additional syphilis testing and treatment history.
- Consider consulting an infectious disease specialist for assistance interpreting results and determining appropriate treatment, if needed.
- Thoroughly evaluate all newborns potentially exposed to syphilis *in utero*.

Treat promptly pregnant women who are diagnosed with syphilis or exposed to syphilis over the last 90 days. (Recommended treatment is summarized in table 2 below.)

- Parenteral penicillin G is the only acceptable syphilis treatment for pregnant women. Intramuscular benzathine penicillin G is the recommended treatment for pregnant women with syphilis who do not have neurologic involvement.
  - Pregnant women with syphilis who report a penicillin allergy must be desensitized and then treated with parenteral penicillin G.
- The treatment regimen must be appropriate for stage of infection, as detailed in the Centers for Disease Control and Prevention 2105 Sexually Transmitted Disease (STD) Treatment Guidelines (www.cdc.gov/std/tg2015/default.htm).

  - For patients with late latent syphilis, administer the three doses of benzathine penicillin G at one-week intervals. Pregnant women who miss any dose by greater than 14 days must repeat the full course.
  - Repeat syphilis titers monthly to document adequacy of response to treatment. Because many patients will deliver before their serologic response to treatment can be adequately assessed, post-partum follow-up of both mother and newborn are critical.
  - Screen for HIV in accordance with Texas Health and Safety Code §81.090.
    - Syphilis treatment recommendations are the same regardless of HIV status.
  - Consider referral of patients to the local health department STD clinic for assistance with syphilis treatment.

Report promptly.

- Promptly notify your local or regional health department of syphilis (any stage) at the time of diagnosis. Include pregnancy status in the report.
  - **All** primary and secondary syphilis cases are required to be reported within 24-hours by telephone for public health follow-up.
  - All other syphilis cases and syphilis test results are required to be reported within seven days (within three days for laboratories).
  - To facilitate timely and adequate treatment for pregnant women, DSHS recommends reporting these syphilis diagnoses within 24 hours by telephone. For more information regarding reporting, please visit www.dshs.state.tx.us/hivstd/healthcare/reporting.shtm
- People known (or suspected) to be pregnant are given highest priority. Local or regional health departments will contact providers to gather clinical, testing, treatment, risk, and partner information.

Update your electronic health record (EHR)/electronic medical record (EMR).

- Review current EHR/EMR systems to ensure that automated laboratory test algorithms, as well as other prompts or flags, are updated to incorporate current testing requirements.

Table 1. Summary of Signs and Symptoms of Syphilis by Stage of Infection

Signs and Symptoms	Stage of Syphilis			
	Primary	Secondary	Early latent	Unknown duration or late latent
Lesion(s) at site of exposure (chancre)	x			
Bilateral rash on palms and/or soles		x		
Generalized rash, often involving trunk		x		
Large, raised, grey or white lesions in warm, moist areas of body (condyloma lata)		x		
No active signs/symptoms but patient recalls above sign/symptom occurring within the past 12 months			x	
No active signs/symptoms and patient does not recall above sign/symptom within the past 12 months				x

Table 2. Summary of Recommended Treatment Regimens for Syphilis Cases Without Neurologic Involvement, per CDC Guidelines

Stage of Syphilis	Benzathine Penicillin G	
	2.4 million units IM as a single dose	7.2 million units IM, administered as 3 doses of 2.4 million units each at 1-week intervals
Primary	x	
Secondary	x	
Early latent	x	
Unknown duration or late latent		x

Congenital Syphilis in Texas

What is Congenital Syphilis?

Women diagnosed with syphilis can pass the infection to their children during fetal development or at birth. Syphilis can cause miscarriage, stillbirth, or death shortly after delivery. According to the Centers for Disease Control and Prevention (CDC), up to 40 percent of babies born to women with untreated syphilis may be stillborn or die as a newborn.[1] Some infants with infection can appear healthy at birth, but develop life-altering complications later in life.

Congenital syphilis can present with a spectrum of serious manifestations, but can also occur without symptoms. Congenital syphilis is classified as "early" when the child exhibits symptoms at birth up to their second birthday, and "late" when symptoms start after age two. Early congenital syphilis can cause vision or hearing loss; non-viral hepatitis causing jaundice of the skin and eyes; long bone abnormalities; developmental delays; enlargement of the liver and/or spleen; inflammation of the mucus membranes of the nose; rash; wart-like lesions on the genitals; and additional symptoms. Older children may develop clinical symptoms of late congenital syphilis, including problems with bone and teeth development, hearing, vision, and the central nervous and cardiovascular systems.[2]

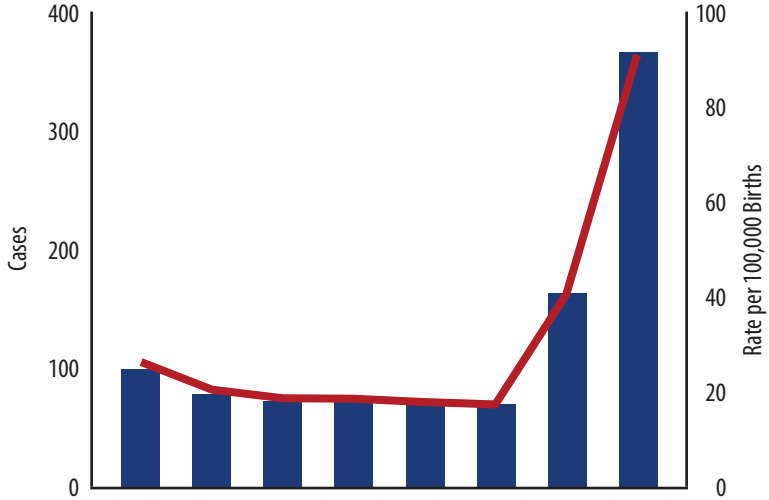
Is Congenital Syphilis a Problem in Texas?

Nationally, the congenital syphilis rate has been rising since 2013. Historically, Texas has reported high numbers of congenital syphilis compared to other states. In 2017, Texas reported the fourth highest rate of congenital syphilis cases in the nation.

In 2018:

- There were 367 cases of congenital syphilis reported to DSHS.
- The rate was 91.0 cases per 100,000 births.
- This represents a 124% increase relative to 2017, when 164 cases were reported at a rate of 40.7 cases per 100,000 live births.
- There were 50 counties that reported congenital syphilis cases.
- The top five reporting jurisdictions for Texas were Harris County (104), Bexar County (61), Dallas County (60), Region 11 (South Texas) (45), and Tarrant County (21).

Figure 1: Texas Congenital Syphilis Cases and Rates by Year of Diagnosis, 2011-2018



Year	2011	2012	2013	2014	2015	2016	2017	2018
Cases	100	79	73	75	73	71	164	367
Case rate	26.5	20.7	18.9	18.8	18.1	17.6	40.7	91.0

Congenital syphilis cases are more likely to occur when pregnant women with syphilis receive late prenatal care or no prenatal care at all. But with timely prenatal care, testing, and treatment, potentially devastating health outcomes for children can be averted.

Syphilis Testing and the Law

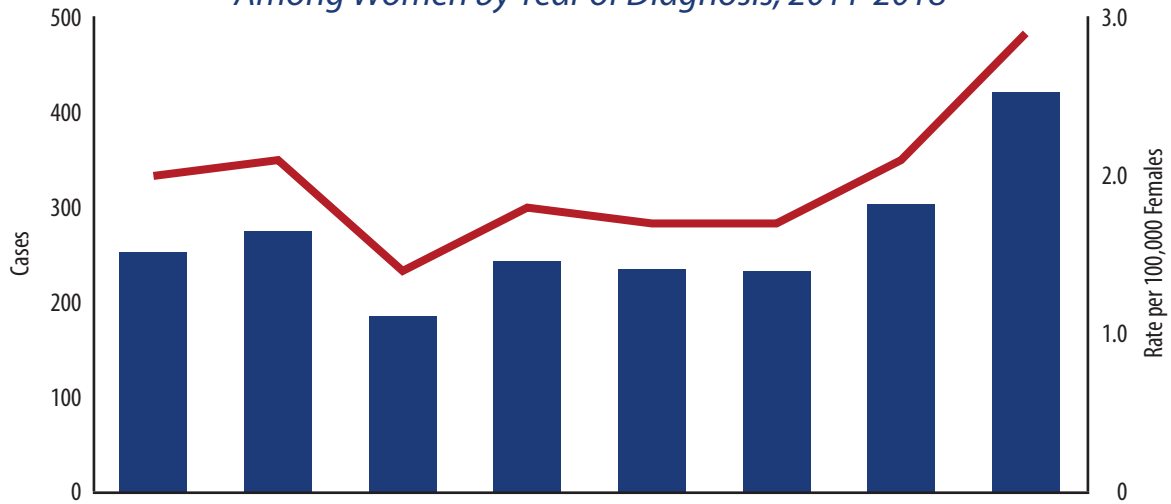
Texas Health and Safety Code Section 81.090 requires all pregnant women in Texas to be tested for syphilis at their **first prenatal visit**, during the **third trimester** of their pregnancy no earlier than 28 weeks gestation, and again at **delivery**. CDC recommends third trimester testing between 28 and 32 weeks gestation. It is important to discuss testing and treatment history with the individual being tested, because persons can still test positive after receiving treatment.

Syphilis in Women

Women with untreated or inadequately treated primary and secondary syphilis (symptomatic syphilis) during pregnancy are more likely to result in clinical congenital syphilis cases. Women with untreated or inadequately treated non-primary, non-secondary syphilis (early and unknown duration or late syphilis that occurs within one or more years after infection) still have a 23 percent chance of an adverse pregnancy outcome.[3]

In 2018, Texas reported 421 primary and secondary syphilis among women at a rate of 2.9 per 100,000 females. This represents a 38% increase relative to 2017, when 304 cases were reported at a rate of 2.1 cases per 100,000 females (Figure 2). Increased rates of syphilis in women has been associated with increased rates of congenital syphilis regardless of pregnancy status.[4]

Figure 2: Primary & Secondary Syphilis Cases and Rates Among Women by Year of Diagnosis, 2011-2018



Year	2011	2012	2013	2014	2015	2016	2017	2018
Cases	253	275	186	244	235	233	304	421
Case rate	2.0	2.1	1.4	1.8	1.7	1.7	2.1	2.9

Treatment for Syphilis

Pregnant women diagnosed with syphilis should seek treatment as early as possible to prevent serious health problems for their children. Long-acting penicillin therapy must be used to treat syphilis during pregnancy to prevent passing the infection to the baby.[5] This therapy is extremely effective in preventing mother-to-child transmission, with a success rate of up to 98 percent.[6] Pregnant women who are allergic to penicillin should see a specialist for desensitization to penicillin.[7]

Women diagnosed with unknown duration or late syphilis require three treatments of penicillin given one week apart; failure to complete this therapy appropriately will result in a reported congenital syphilis case. Additionally, the penicillin treatment regimen appropriate for the mother's stage of syphilis must be initiated at least 30 days prior to delivery to prevent a congenital syphilis case.

Whenever possible, physicians should treat their own patients instead of referring them to other providers to avoid losing patients to follow-up. Local health departments can also answer questions about treatment. Since syphilis can be passed between partners, it is also important to discuss the possibility of reinfection with syphilis if they have sex with an untreated partner. For infants with probable congenital syphilis or syphilis exposure, please refer to the treatment guidelines.

Reporting Syphilis

In Texas, syphilis is a reportable condition and all positive syphilis labs are required to be reported to DSHS in accordance with Texas Administrative Code, Title 25, Part 1, Chapter 97, Subchapter F. If a patient presents with symptoms of primary or secondary syphilis, reporting guidelines mandate reporting within 24 hours to the local health authority for public health follow-up. For additional information about reporting, please see the DSHS disease reporting website or consult with the local or regional health department.

** There are slight variations between the numbers reported in the CDC National Report and those reported in the Texas STD Surveillance Report. This is due to the use of different report dates contained within the data.*

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7 Centers for Disease Control and Prevention, "2015 Sexually Transmitted Diseases Treatment Guidelines," June 2015. [Online]. Available: www.cdc.gov/std/tg2015/ [Accessed August 28, 2019].

FAST FACTS
Congenital Syphilis

Syphilis is curable.

Congenital syphilis is preventable.

Offer syphilis testing to your patients. Syphilis testing is legally required for pregnant women.

Local reporting authorities
www.dshs.texas.gov/hivstd/reporting/regions

CDC STD Treatment guidelines for syphilis
www.cdc.gov/std/tg2015/syphilis.htm

Special considerations for pregnant women with syphilis
www.cdc.gov/std/tg2015/syphilis-pregnancy.htm

Congenital Syphilis treatment guidelines
www.cdc.gov/std/tg2015/congenital.htm

DSHS TB/HIV/STD Section

(512) 533-3000
www.dshs.texas.gov/hivstd

Publication No. 13-13593
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TEXAS Health and Human Services | Texas Department of State Health Services

Fetal Infant Morbidity Review for Congenital Syphilis and Perinatal HIV

Texas Department of State Health Services HIV/STD Program

Background

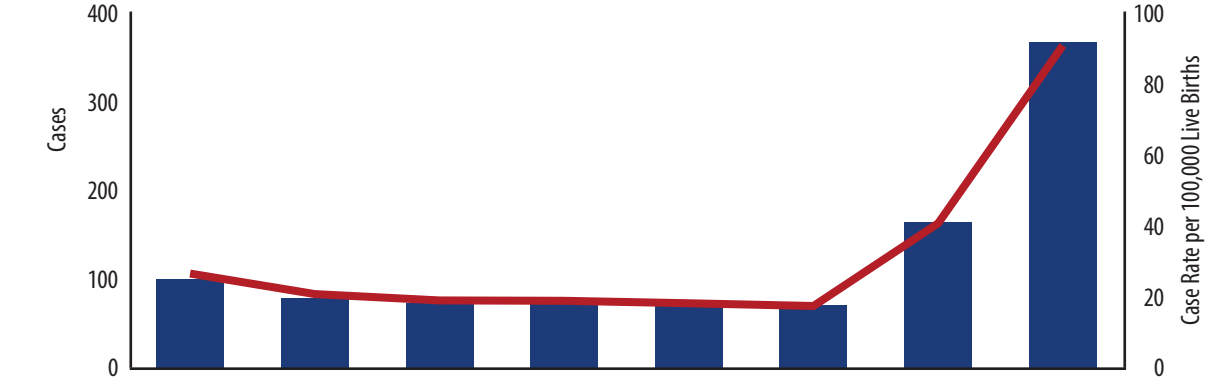
Vertical transmission (also known as mother-to-child transmission) of HIV or syphilis can occur during a women's pregnancy and during delivery. Proper treatment of the mother can greatly reduce the chance of transmission.

Texas launched a pilot initiative in 2015 to investigate the missed opportunities that lead to transmission of syphilis and HIV. The goal is to use the findings to change health care systems to prevent future transmission. DSHS, Harris Health, and Baylor College of Medicine created the pilot of the Texas Fetal and Infant Morbidity Review of Syphilis and HIV (FIMRSH) to address the burden of both perinatal HIV and congenital syphilis starting in the Houston area.

When vertical transmission of syphilis occurs during pregnancy or delivery, this is called congenital syphilis. The congenital syphilis rate has been rising across the country since 2013. The number of cases of congenital syphilis in 2017 in the U.S. was the highest since 1997.[1] In 2018, 367 congenital syphilis cases were reported in Texas, a rate of 91.0 per 100,000 live births. This represents a 124% increase relative to 2017, when 164 cases were reported at a rate of 40.7 cases per 100,000 live births.[2]

Vertical transmission of HIV during pregnancy, delivery or breastfeeding is called perinatal HIV. Unlike congenital syphilis, perinatal HIV transmission has declined by more than 95% since the early 1990s in the U.S.[3] Since 1999, over 7,000 infants were born to women living with HIV in Texas. From 2013 through 2017, there were 18 infants diagnosed with HIV in Texas.[4] Although the number of infants diagnosed with HIV may seem small, they are representative of the many recurring missed opportunities to prevent perinatal transmission of HIV.[5]

Texas Congenital Syphilis Cases and Rates by Year of Diagnosis, 2011-2018



Year	2011	2012	2013	2014	2015	2016	2017	2018
Cases	100	79	73	75	73	71	164	367
Case Rate	26.5	20.7	18.9	18.8	18.1	17.6	40.7	91.0

Methods[6]

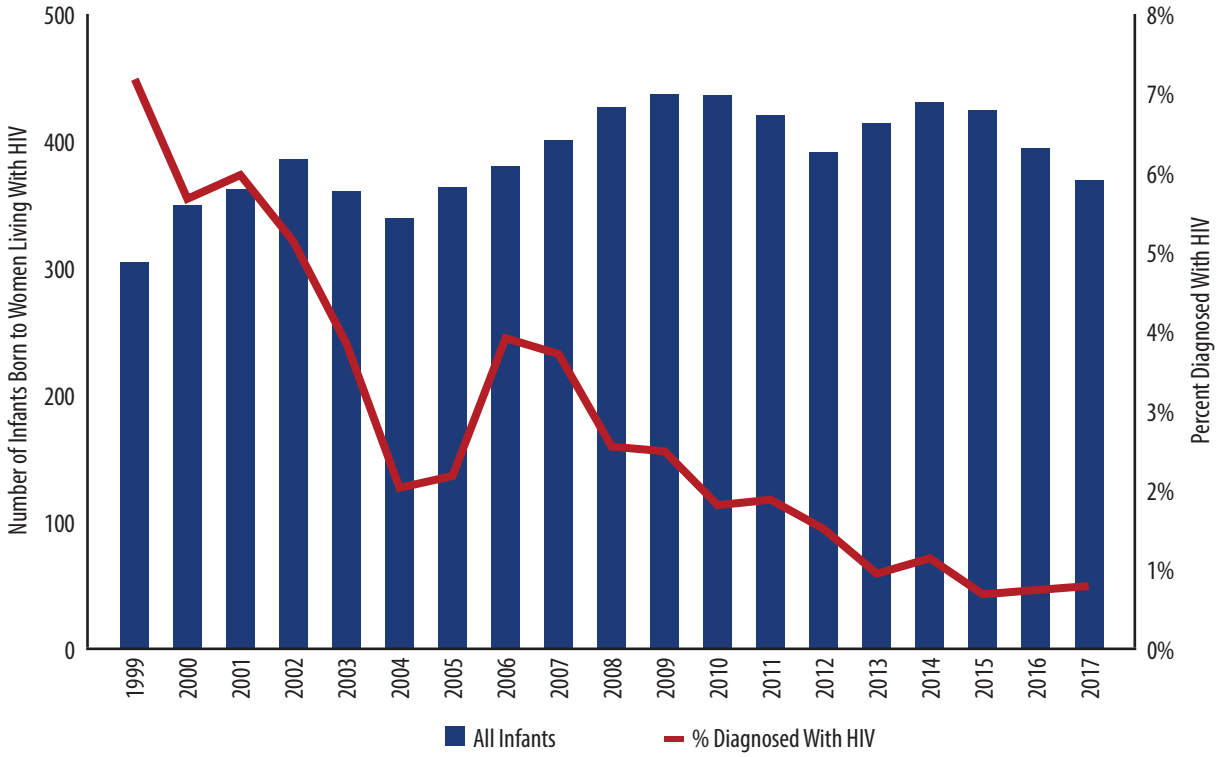
The FIMRSH methodology involves several processes: data collection, case reviews, and community action with an overall goal to improve services for women, infants, and families.

The FIMRSH process begins by selecting cases for review. Priority is given to cases with potential gaps or barriers in services or systems issues. An in-depth medical record abstraction is done to gather data about these cases from multiple sources, including public health and medical records. Also critical to the process is an interview with the mother to learn from the woman's unique perspective.

The second step brings in the Case Review Team (CRT). The CRT includes community members and professionals from a wide range of public and private agencies that provide services for women, infants, and families. The CRT reviews cases quarterly to identify barriers to care and deficiencies in services the family did or did not receive. They then make recommendations for improvement.

The final step is the Community Action Team (CAT). The CAT consists of a diverse group of community leaders. They implement the CRT's recommendations by initiating system changes in the community, prioritizing interventions to improve service systems and resources.

Infants Born to Women living with HIV in Texas, 1999-2017



Findings and Action

CRT meetings have been held regularly in Houston since December 2015. The CRT has reviewed 48 cases (22 perinatal HIV, 20 congenital syphilis, and 6 dual diagnosis of HIV and syphilis) as of August 2019. The CRT identified several barriers:

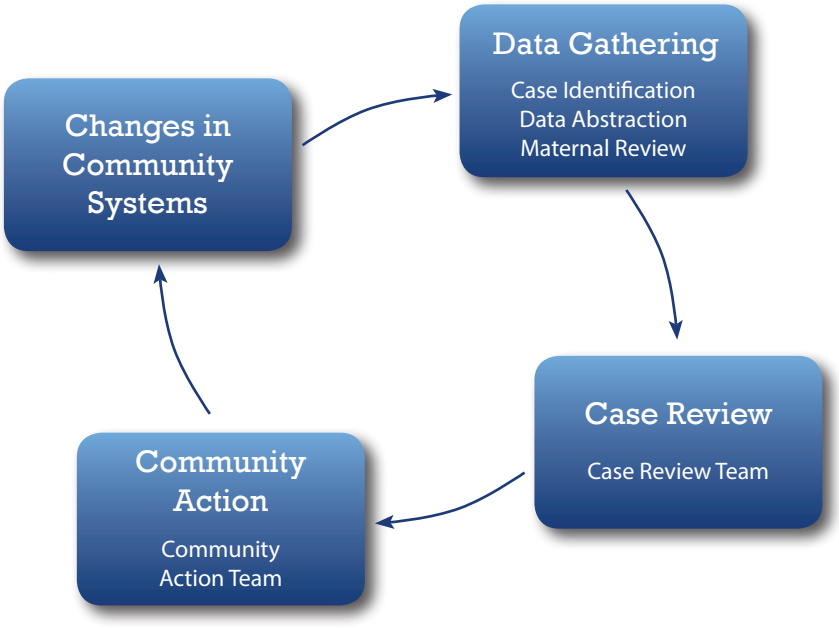
- lack of HIV testing with other STD diagnoses,
- incomplete HIV testing per the diagnostic algorithm,
- incomplete linkage to HIV care services,
- lack of family planning services,
- insufficient housing and transportation support,
- insufficient treatment for substance use and mental illness, and
- lack of partner services follow up.

The first CAT meeting was held in January 2017. The CAT has addressed both specific case-related items and larger community-related issues including:

- educating providers on the Texas testing laws for pregnant women,
- initiating testing policies for syphilis and HIV in local correctional facilities,
- improving timeliness of laboratory reporting, and
- increasing community awareness of available resources for:
  - persons living with HIV who are out of care or inadequately engaged in care,
  - persons experiencing domestic or intimate partner violence,
  - persons with substance use disorder
  - persons experiencing housing instability, and
  - persons needing free or low cost STD and HIV testing.

The Houston FIMRSH core team merged the CRT and CAT meetings in 2018 to allow recommendations to be made during the case review meetings.

FIMRSH Methodology



FIMR for congenital syphilis was established in San Antonio in 2018. The group has reviewed 12 cases as of August 2019.

FIMR congenital syphilis activities are planned for Dallas-Fort Worth and Public Health Region 11 (Rio Grande Valley) in 2020.

Conclusion

FIMRSH has made progress in addressing systems of care for women, infants, and families. A notable improvement is improved collaboration with laboratory services to improve access to labs within electronic medical records resulting in more successful linkage of pregnant women living with HIV to care. Other systems improvements include the addition of questions for perinatal HIV and congenital syphilis to the Annual Hospital Survey, improved communication with collaborators involved in post-incarceration linkage to care, increased provider education, supporting changes in Medicaid transportation rules to allow women to bring children with them to prenatal appointments, and collaboration with Medicaid and Ryan White providers.

References

1. Centers for Disease Control and Prevention (CDC). Congenital Syphilis Fact Sheet; Dated September 26, 2017
2. Texas Department of State Health Services. Texas 2018 STD Surveillance Report; Dated August 20, 2019
3. Centers for Disease Control and Prevention (CDC). HIV and Pregnant Women, Infants, and Children; Dated June 12, 2019
4. Texas Department of State Health Services. TB/HIV/STD Epidemiology & Surveillance Branch, HIV Surveillance Data. Perinatal Data for Prevention. November 2018
5. Deverson, C., Levison, J., Russell K., Eppes, C., Filipowicz, R., McFarlane, J., Minnerly, S. (September 2016). FIMRSH: An Adaptation of a Novel Methodology (Fetal and Infant Mortality Review or FIMR) for the Review of Perinatal HIV and Congenital Syphilis Cases in Texas. Poster presented at the CityMatch Conference, Philadelphia, Pa.
6. FIMR/HIV Prevention Methodology National Resource Center. 2015 FIMR/HIV Manual of Operations

RESOURCES FOR FIMR

FIMR-HIV www.fimrhiv.org

Texas TRAIN Courses
Implementing Routine HIV Testing in Texas
Perinatal HIV Prevention 2014 Update

Perinatal HIV Hotline
nccc.ucsf.edu/clinician-consultation/perinatal-hiv-aids/
Call for a Phone Consultation 24 hours, Seven days a week: 1-888-448-8765

2015 Sexually Transmitted Diseases Treatment Guidelines
www.cdc.gov/std/tg2015/syphilis.htm

HIV, Syphilis and HBV Testing and Pregnancy: State Requirements for Texas Clinicians
www.dshs.texas.gov/hivstd/info/edmat.shtm

DSHS TB/HIV/STD Section

(512) 533-3000
www.dshs.texas.gov/hivstd

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TEXAS Health and Human Services | Texas Department of State Health Services

HIV, Syphilis and HBV Testing and Pregnancy: State Requirements for Texas Clinicians

Texas law (Texas Health and Safety Code § 81.090) requires physicians or others permitted by law to attend a woman during pregnancy or at delivery to test her for human immunodeficiency virus (HIV), syphilis, and hepatitis B virus (HBV). She must be tested for HIV, syphilis, and HBV at her first prenatal visit. She must be tested for HIV and syphilis during the third trimester, at 28 weeks or later. She must also be tested for syphilis and HBV at delivery as well as HIV if there is no record of HIV testing during third trimester. Expedited HIV testing of infants at delivery is also required if a mother's results are undetermined.

Time of Test	Perinatal Tests Required by Texas Law
First Prenatal Visit	• HIV, HBV, and syphilis test required
Third Trimester	• HIV test required • Syphilis test required at 28 weeks or later[1]
Delivery	• Expedited HIV test required if no third trimester result[2] • Syphilis test required • HBV test required
Newborn Tests	• Expedited HIV test[2] required if no record of third trimester or delivery result

1 CDC recommends testing between weeks 28 and 32. Treatment should begin 30 days before delivery for optimal results.
2 Expedited test. Test must be expedited and result obtained < 6 hours. For newborn test, blood must be drawn < 2 hours after birth.

Pregnancy Stage	Additional Recommended Perinatal Tests and Precautions[1]
First Prenatal Visit	• Chlamydia and gonorrhea screening for women under 25 years and older women at increased risk[2] • Retest 3-4 weeks after treatment for chlamydia
Third Trimester	• Chlamydia test for women under 25 years and older women at increased risk[2] • Gonorrhea test for women at increased risk[2]
Newborn Vaccinations and Precautions	• First of three HBV vaccinations is given • Required prophylaxis to prevent ophthalmia neonatorum (conjunctivitis sometimes caused by gonorrhea or chlamydia bacteria) • Evaluation of the infant exposed to syphilis as recommended by the Centers for Disease Control and Prevention (CDC) Treatment Guidelines[3]

1 Recommendations from the CDC and the American College of Obstetricians and Gynecology (ACOG).
2 Increased risk means new or multiple sex partners, sex partner with concurrent partners, or sex partners who have an STD.
3 Born to mothers with reactive non-treponemal/treponemal labs: Quantitative nontreponemal serologic test (RPR or VDRL) performed on the neonate's serum.

Why test pregnant women?

Testing and treatment for HIV, syphilis, and HBV prevents infected infants. Left untested and untreated, a mother with HIV has about a 25 percent chance of transmitting HIV to her unborn child. When pregnant women with HIV are diagnosed and provided with appropriate care and treatment, including treatment for the newborn, the HIV transmission rate can be reduced to 2 percent or less. Even when medicine is not started until labor and delivery, transmission rates are reduced to 10 percent.

Therapy includes antiretroviral medicine as well as cesarean delivery for women with high HIV viral loads (>1,000 copies/ml). Testing and treatment also decreases rates of syphilis and HBV infection. Perinatal syphilis screening allowed Texas clinicians to identify 367 cases of congenital syphilis in 2018, enabling them to provide treatment and follow up. For infants born to women with infectious HBV, 70-95 percent will not be infected if they receive HBV vaccine and treatment within 12 hours of delivery.

TEXAS Health and Human Services
Texas Department of State Health Services

Consent and Information Distribution

Before testing a patient for HIV, syphilis, or HBV, the clinician must inform the woman that the tests will be performed unless she objects (HIV only). Separate consent forms are not required and verbal notification is acceptable. Most women give consent to be tested.

If a woman objects, the clinician should refer her to an anonymous HIV testing site. In addition to the referral, the clinician can discuss testing with the patient. Women refuse testing for different reasons. Listen to the patient and provide information about risk factors, advantages of testing, ease of testing, and HIV-related resources if the result is positive. A clinician cannot test a woman for HIV without consent. Medical records should reflect that the test was explained to the patient and she consented.

All women, regardless of consent, must receive printed materials about HIV, syphilis, and HBV. Materials must include information about disease transmission and prevention, frequency, infection consequences for the child, and available treatment. When possible, material should be provided in a language and literacy level patients understand.

Appropriate materials are available in English and Spanish from the Texas Department of State Health Services (DSHS). Medical records should also note the patient received printed materials.

Positive HIV Test Results

If a woman receives a preliminary positive HIV result for an expedited test at labor and delivery, CDC and ACOG recommend starting prophylaxis treatment for the woman and her infant. When a pregnant woman has HIV, syphilis, or HBV, the clinician must provide disease-specific treatment information she can understand. The clinician may also refer her to another clinic for appropriate treatment.

Clinicians must provide the opportunity for individual, face-to-face counseling to each pregnant woman with a positive HIV test result immediately upon revealing her test results.

Post-test HIV counseling must include the:

- Meaning of the test result;
- Possible need for additional testing;
- Measures to prevent transmission of HIV;
- Benefits of partner notification;
- Availability of confidential partner notification services through local public health departments; and
- Availability of health care services, including mental health social and support services, in the area where the patient lives (refer patients to 211).

Post-test HIV counseling should:

- Increase understanding of HIV infection;
- Explain potential need for confirmatory testing;
- Explain ways to change behavior to prevent HIV transmission;
- Encourage the patient to seek appropriate medical care; and
- Encourage the patient to notify her sex or needle-sharing partners or access partner notification services.

For more information, additional resources and a list of free patient education materials, please visit www.dshs.texas.gov/hivstd/info/pregnancy.shtm.

Perinatal Hotline
Call 888-448-8765 for free 24-hour clinical consultation and advice on treating HIV-infected pregnant women and their infants as well as indications and interpretations of rapid and standard HIV testing in pregnancy.

Records Retention
Clinicians must retain a report of each client case for nine months and deliver the report to any successor in the case.

Confidential Test
A confidential test means the test result is in the medical record.

Anonymous Test
An anonymous test means that the patient's name is not used.

Visit gettested.cdc.gov
to find an HIV or STD testing site.

Call 211 or (800) CDCINFO
to find an HIV/AIDS service provider in Texas or locate other patient resources.

Texas HIV Medication Program
Refer patients unable to pay for HIV medications to (800) 255-1090.

DSHS HIV/STD Program

(512) 533-3000
www.dshs.texas.gov/hivstd

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