The Revised Congenital Syphilis Report Form – What’s New, Why, and How to Use It

John R. Su, MD, PhD, MPH
Division of STD Prevention

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Background

- The congenital syphilis (CS) report form (REV 4–2010) expires April 2013
- REV 4–2010 with shortcomings:
  - Case classification
  - Older/suboptimal technology and treatment
- Opportunity to revise collected data elements
  - More consistent with CS surveillance case definition
  - Update to reflect current technology and treatment
  - Include more informative data elements (e.g., testing by trimester, specific signs of CS in baby)
- NO CHANGE TO EXISTING CASE DEFINITION OF CS
Today’s Discussion

- Review CS surveillance case definition
- Case classification algorithms
- Data elements no longer collected on revised CS form
- New data elements collected on revised CS form, and why they are of interest
- Scenarios
- Questions and answers
- [http://www.cdc.gov/std/program/resources.htm](http://www.cdc.gov/std/program/resources.htm)
SURVEILLANCE CASE DEFINITION OF CS
CSTE Case Definition of CS

- Syphilis, Congenital (Revised 9/96)*
  - Confirmed: a case that is laboratory confirmed (by darkfield microscopy or special stain, such as fluorescent antibody) in specimens from lesions, placenta, umbilical cord, or autopsy material

CSTE Case Definition of CS

- Syphilis, Congenital (Revised 9/96)*
  - 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) test
    - An elevated CSF cell count or protein (without other cause)
    - A reactive treponemal IgM test (e.g., fluorescent treponemal antibody absorbed—19S-IgM antibody test, IgM EIA)

† non-penicillin therapy or penicillin administered <30 days before delivery
CSTE Case Definition of Syphilitic Stillbirth

- A fetal death that occurs
  - After a 20-week gestation, or
  - In which the fetus weighs >500 g
  
  ...and the mother had untreated or inadequately treated* syphilis at delivery

- Reported as “congenital syphilis”

* non-penicillin therapy or penicillin administered <30 days before delivery
CONGENITAL SYphilis (CS) CASE INVESTIGATION ALGORITHM

1. Case*(report)
   - Yes: Mother has syphilitic lesion at delivery (Footnote a)
   - No: Not a case

2. Case*(report)
   - Yes: Infant/child has classic signs of CS (Footnote e), positive darkfield exam, DFA, or 19S-IgM-FTA-ABS (Footnote f)
   - No/Unk: Not a case

3. Case*(report)
   - Yes: Mother treated adequately before delivery (Footnote b)
   - No/Unk: Not a case

4. Mother had appropriate serologic response (no evidence of reinfection) (Footnote c)
   - Yes: Case*(report)
   - No: Evaluate infant/child

Evaluate infant/child

- Normal X-ray and CSF exam
- X-ray changes present/not done
  - CSF VDRL reactive/not done
  - CSF cell count or protein abnormal/not done (Footnote g)

*(Includes stillbirths born to these mothers (Footnote d)*
Algorithms on Revised CS Form

MATERNAL CRITERIA TO REPORT CONGENITAL SYphilis

START HERE
Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy? (Footnote A)
YES
Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?
YES/Unknown
Probable case by maternal criteria (report)
NO
Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*
NO/Unknown
Probable case by maternal criteria (report)

INFANT/CHILD CRITERIA TO REPORT CONGENITAL SYphilis

START HERE
Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (-) special stains examination?
YES
Infant/child has ANY one of the following:
- Physical signs of CS (Footnote E)
- Evidence of CS on long bone X-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) (Footnote F)
- Reactive cerebrospinal fluid VDRL
- Non-reactive/not done/unknown
- Reactive cerebrospinal fluid VDRL
- Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*
- Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

CRITERIA TO REPORT SYphilitic STILLBIRTH

START HERE
Did mother of stillbirth have serologic tests for syphilis?
YES
Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?
YES/Unknown
Report as syphilitic stillbirth
NO
Probable case by maternal criteria (report)
NO/Unknown
Report as syphilitic stillbirth

*If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis
MATERNAL CRITERIA TO REPORT CONGENITAL SYPHILIS

START HERE
Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy? (Footnote a)

<table>
<thead>
<tr>
<th>YES</th>
<th>Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NO/unknown</td>
</tr>
</tbody>
</table>

| NO  | Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*                                           |

<table>
<thead>
<tr>
<th>PROBABLE CASE BY MATERNAL CRITERIA</th>
<th>(report)</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES/unknown</td>
<td>NOT A CASE BY MATERNAL CRITERIA; EVALUATE INFANT/CHILD (GO TO INFANT/CHILD CRITERIA)*</td>
</tr>
</tbody>
</table>

** MMWR Recomm Rep. 1997 May 2;46(RR-10):1-55. ** 
Maternal Criteria Algorithm

MATERNAL CRITERIA TO REPORT CONGENITAL SYPHILIS

START HERE
Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy? (Footnote a)

- NO/unknown
  - Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*

- YES/unknown
  - Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?
    - NO
      - Probable case by maternal criteria (report)
    - YES
      - Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*

* If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis

Infant/Child Criteria Algorithm

**INFANT/CHILD CRITERIA TO REPORT CONGENITAL SYPHILIS**

**START HERE**
Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

YES

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) **

Probable case by infant/child criteria (report)

NO/Unknown/not done

START HERE

Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

NO/Unknown/not done

**What is the infant/child’s non-treponemal test result?**

Reactive

- If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis

Non-reactive/not done/unknown

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Confirmed case by infant/child criteria (report)

*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.

*If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis
**Infant/Child Criteria Algorithm**

**INFANT/CHILD CRITERIA TO REPORT CONGENITAL SYPHILIS**

**START HERE**

Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

- **YES**
  - Confirmed case by infant/child criteria (report)

- **NO/Unknown/not done**
  - What is the infant/child’s non-treponemal test result?
    - **Reactive**
      - Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*
    - **Non-reactive/not done/unknown**
      - Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) **

- **YES**
  - Probable case by infant/child criteria (report)

- **NO/Unknown/not done**
  - Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

---

* * If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis

**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.**
Infant/Child Criteria Algorithm

INFANT/CHILD CRITERIA TO REPORT CONGENITAL SYPHILIS

START HERE
Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

NO/Unknown/not done

What is the infant/child’s non-treponemal test result?

Reactive

Non-reactive/not done/unknown

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Consistent with treatment guidelines

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause)**

YES

Probable case by infant/child criteria (report)

NO/Unknown/not done

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

* If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis.

* * 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.
Infant/Child Criteria Algorithm

INFANT/CHILD CRITERIA TO REPORT CONGENITAL SYPHILIS

START HERE
Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

NO/Unknown/ not done

What is the infant/child’s non-treponemal test result?

Reactive

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) **

Probable case by infant/child criteria (report)

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Confirmed case by infant/child criteria (report)

Non-reactive/ not done/unknown

* 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.

** If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis.
**CRITERIA TO REPORT SYPHILITIC STILLBIRTH**

**START HERE**
Did mother of stillbirth have serologic tests for syphilis?

NO/Unknown

- Fetal death after
  - 20 weeks’ gestation or
  - > 500 g

YES

- Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy? (Footnote a)

NO/unknown

- Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?

YES/unknown

- Not a syphilitic stillbirth

NO

- Report as syphilitic stillbirth
Data elements omitted in revised CS report form

- Did mother have prenatal care (part of new element)
- Did mother have treponemal test (part of new element)
- Nontreponemal test in pregnancy, at delivery, or soon after delivery within 3 days (part of new element)
- Number of prenatal visits
- Sex of infant/child
- Did mother have DFA or lesions at delivery
- IgM-specific treponemal test result
- Ampicillin as a treatment for CS
- Number of non-treponemal titers reduced (now most recent (last) and first titers of current pregnancy collected)
New data elements in revised CS report form

- Mother’s obstetric history
- Trimester of first prenatal visit
- Did mother have non-treponemal or treponemal tests at 1st trimester, 28–32 weeks gestation, and delivery?
  - Number of titers recorded reduced (first and most recent (last) titers now recorded)
- Indicate during pregnancy, date, type, and result of a) first and b) most recent maternal treponemal tests.
- What was mother’s HIV status during pregnancy?
- What clinical stage of syphilis did mother have during pregnancy?
New data elements (cont’d)

- What surveillance stage of syphilis did mother have during pregnancy?
- When did mother receive her first dose of benzathine penicillin, and what was her treatment (e.g., dose).
- Modified responses to mother’s serologic response to treatment (e.g., “equivocal” omitted)
- Did the infant/child have any signs of CS? (Specific signs and symptoms of CS are listed)
- Did the infant/child have a CSF white blood cell count or CSF protein test?
  - Results of both tests are recorded; footnote provides quantitative measure of “elevated”
(9.) Mother’s Obstetric History

Mother’s Obstetric History:

- G______ P______

(G = pregnancies, P = live births)
(9.) Mother’s Obstetric History

“Mother’s obstetric history”

- **G = “Gravida,” how many times mom has been pregnant, including this pregnancy**
  - Includes stillbirths, elective terminations, etc.
- **P = “Para,” how many live births mom has delivered**
  - Can be greater than G (e.g., G1P2 = twins)
- If unavailable, enter “99” for both G and P

**Rationale:**

- Included to potentially detect CS in siblings — If current pregnancy is mom’s second (i.e., G2P2), was first pregnancy a missed case of CS?
(11b.) Trimester of first prenatal visit

<table>
<thead>
<tr>
<th>Trimester</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1st trimester</td>
</tr>
<tr>
<td>2</td>
<td>2nd trimester</td>
</tr>
<tr>
<td>3</td>
<td>3rd trimester</td>
</tr>
<tr>
<td>9</td>
<td>Unk</td>
</tr>
</tbody>
</table>

b) Indicate trimester of first prenatal visit:
(11b.) Trimester of first prenatal visit

- **“Indicate trimester of first prenatal visit”:**
  - 1\textsuperscript{st}, 2\textsuperscript{nd}, or 3\textsuperscript{rd} trimester
  - Replaces “Number of prenatal visits”

- **Rationale:**
  - Most states mandate screening for syphilis at first prenatal visit*
  - Treatment with penicillin early in pregnancy can prevent deaths associated with CS†
  - Might reveal access to care issues (e.g., first visit during 3\textsuperscript{rd} trimester)

(14.) Mother’s serologic testing at 1st trimester, 28–32 weeks, and delivery
(14.) Mother’s serologic testing at 1st trimester, 28–32 weeks, and delivery

- “Did mother have non-treponemal or treponemal tests at:”
  - First prenatal visit
  - 28–32 weeks gestation
  - At delivery

- **Rationale:**
  - These time points (1st trimester, 28–32 weeks, delivery) correspond with treatment guidelines on screening for CS*
  - Might also reveal quality of care issues (e.g., titers only drawn at delivery)

17. Indicate during pregnancy, date, type, and result of a) first and b) most recent treponemal tests:

<table>
<thead>
<tr>
<th>Date</th>
<th>Test Type</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. <em>/<strong>/</strong></em>__</td>
<td>1 □ EIA or CLIA 9 □ Unk</td>
<td>1 □ Reactive 2 □ Nonreactive 9 □ Unk</td>
</tr>
<tr>
<td>b. <em>/<strong>/</strong></em>__</td>
<td>2 □ TP-PA 9 □ Unk</td>
<td>1 □ Reactive 2 □ Nonreactive 9 □ Unk</td>
</tr>
</tbody>
</table>
(17.) Date and type of maternal treponemal tests

- **Rationale:**
  - Reverse testing algorithm (e.g., screening with treponemal tests) identifies mothers not previously detected
    - Treponemal test (TT) (+), nontreponemal test (NT) (-)
    - Current recommendations for reverse testing are to confirm TT (+), NT (-) with a second TT (e.g., TP-PA)
    - Clinical implications not clear*
  - Will help quantify number of cases identified by reverse testing; how many cases consistent with guidelines for reverse testing

(18.) Mother’s HIV status

<table>
<thead>
<tr>
<th>18. What was mother’s HIV status during pregnancy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>P  positive</td>
</tr>
<tr>
<td>E  equivocal test</td>
</tr>
<tr>
<td>X  patient not tested</td>
</tr>
<tr>
<td>N  negative</td>
</tr>
<tr>
<td>U  Unk</td>
</tr>
</tbody>
</table>
(18.) Mother’s HIV status

- “What was mother’s HIV status during pregnancy?”
  - Answer based upon abstraction from medical records, not patient interview:
    - Positive, negative, equivocal test, patient not tested
    - Unknown (if no data available)

- Rationale
  - Women with syphilis are at risk for infection with HIV*
    - First prenatal visit screening for HIV is recommended
  - Mother-to-child transmission of HIV can be prevented†

* All persons with syphilis should be tested for HIV (MMWR Recomm Rep. 2010 Dec 17;59(RR-12):1-110.)
† [http://www.cdc.gov/hiv/topics/perinatal/](http://www.cdc.gov/hiv/topics/perinatal/) (last accessed 2./27/13)
(19.) and (20.) Mother’s stage of infection

19. What **CLINICAL** stage of syphilis did mother have during pregnancy?

- 1️⃣ primary
- 2️⃣ secondary
- 3️⃣ early latent
- 4️⃣ late or late latent
- 5️⃣ previously treated/serofast
- 6️⃣ early untreated
- 7️⃣ late untreated
- 8️⃣ Other
- 9️⃣ Unk

20. What **SURVEILLANCE** stage of syphilis did mother have during pregnancy? (Footnote A)

- 1️⃣ primary
- 2️⃣ secondary
- 3️⃣ early latent
- 4️⃣ late or late latent
- 5️⃣ Other
- 6️⃣ Unk
(19.) and (20.) Mother’s stage of infection

- Revised CS report form specifies *clinical* and *surveillance* stage of infection
  - Primary, secondary, (early or late) latent, late
  - Previously treated/serofast if titers remain present but low
  - Clinical diagnosis might differ from surveillance case definition
    - If mother doesn’t have syphilis, check “other” for surveillance stage of infection

- **Rationale:**
  - Dosage of penicillin depends upon stage of infection
(21.) When mother received her first dose of benzathine penicillin
(21.) When mother received her first dose of benzathine penicillin

Rationale:
- Combined with date of serologic test results, can give indication of how timely treatment was received
(22.) What was mother’s treatment?

1. 2.4 M units benzathine penicillin
2. 4.8 M units benzathine penicillin
3. 7.2 M units benzathine penicillin
4. Other
5. Unk
(22.) What was mother’s treatment

- “What was mother’s treatment?”
  - 2.4 million units benzathine penicillin
  - 4.8 million units benzathine penicillin
  - 7.2 million units benzathine penicillin
  - Other
  - Unknown

- **Rationale:**
  - Dose of benzathine penicillin dependent upon stage
  - Combined with stage of infection, can indicate quality of care
(23.) Mother’s serologic response to treatment

23. Did mother have an appropriate serologic response? (Footnote B)
1. ☐ Yes, appropriate response
2. ☐ No, inappropriate response: evidence of treatment failure or reinfection
3. ☐ Response could not be determined from available non-treponemal titer information
4. ☐ Not enough time for titer to change
(23.) Mother’s serologic response to treatment

- “Did mother have an appropriate serologic response?”
  - Yes, appropriate response
  - No, inappropriate response: evidence of treatment failure or reinfection
  - Response could not be determined from available non-treponemal titer information (e.g., only 1 titer available)
    - “Equivocal” response no longer considered
  - Not enough time for titer to change

- Rationale
  - Serologic response is not part of CS case definition
  - Included for case management purposes
### (32.) Specific signs of CS

<table>
<thead>
<tr>
<th>Question</th>
<th>Possible Signs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did the infant/child have any signs of CS?</td>
<td>Hepatosplenomegaly, jaundice/hepatitis, pseudo paralysis, edema, condyoma lata, snuffles, syphilitic skin rash, other, unk.</td>
</tr>
</tbody>
</table>

---
(32.) Specific signs and symptoms of CS

- The revised CS report form lists specific signs:
  - No signs/asymptomatic
  - Condyloma lata
  - Snuffles (nasal discharge)
  - Syphilitic skin rash
  - Hepatosplenomegaly (enlarged liver and spleen)
  - Jaundice/hepatitis
  - Pseudoparalysis
  - Edema (swelling of limbs or extremities)
  - Other
  - Unknown

- Rationale: more informative about clinical signs
(35.) Cerebrospinal fluid (CSF) analysis
(35.) Cerebrospinal fluid (CSF) analysis

“Did the infant/child have a CSF WBC count or protein test?”

- Yes, CSF white blood cell (WBC) count elevated*
- Yes, CSF protein elevated*
- Both tests elevated
- Neither test elevated
- No test
- Unknown

Rationale

- More informative regarding evidence of neurosyphilis

* 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.
SUMMARY

- **Revisions to the CS report form**
  - Algorithms more consistent with CS case definition
    - Maternal serologic response to treatment not considered
    - *Probable*, not “presumptive” cases
  - Updates some data elements
    - Ampicillin no longer a treatment for CS
    - Treponemal IgM data no longer collected
  - Introduces some new data elements
    - Maternal treponemal test type (EIA, CIA, TP-PA)
    - Maternal HIV status
    - Specific signs of CS in infant/child on exam
    - Others
SCENARIOS
One possible scenario*

- **Mother’s information:**
  - 27 yo mother, who is EIA (+) with RPR of 1:16
  - previously treated for secondary syphilis (2009) with 2.4 MU bicillin
    - last reported RPR of 1:2
  - Mother has no symptoms, and reports no symptoms consistent with syphilis in past 12 months

- **Question:**
  - What stage of syphilis does this mother have?

* All persons and events depicted in this scenario are fictitious. Any similarity to actual persons, living or dead, or events is absolutely unintentional.
Answer: late latent syphilis

- Mother has no symptoms
  - Mother reports no symptoms consistent with syphilis in past 12 months

- Mother has reactive treponemal test (EIA (+))
  - Mother treated for secondary syphilis in the past

- Mother’s last RPR = 1:2, but her titer is now 1:16
  - Four-fold increase in non-treponemal titer

- Mother meets case definition for late latent syphilis
The mother with late latent syphilis received her first dose of 2.4 million units of benzathine penicillin 40 days before delivery.

She received her 3rd dose of benzathine penicillin (e.g., she completed treatment) 26 days before delivery.

Question:

- Was this mother adequately treated for syphilis?
Answer: yes, mother was adequately treated

- **Mother received 7.2 MU bicillin penicillin**
  - Appropriate treatment for late latent syphilis*

- **Mother completed treatment 26 days before delivery**
  - *Began treatment more than 30 days before delivery*

* MMWR Recomm Rep. 2010 Dec 17;59(RR-12):1-110
MATERNAL CRITERIA TO REPORT CONGENITAL SYPHILIS

START HERE
Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy? (Footnote a)

YES
Did mother complete penicillin-based treatment appropriate for her stage of syphilis that began 30 days or more before delivery?

NO
Did mother meet surveillance case definition for syphilis, or was diagnosed with syphilis, during pregnancy?

* If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis

NO/unknown
Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*

YES/unknown
Not a case by maternal criteria; evaluate infant/child (GO TO INFANT/CHILD CRITERIA)*

Probable case by maternal criteria (report)
Another scenario*

- **Child’s information:**
  - Mother’s information unavailable
  - Seen at pediatrician’s office for fever and bloody, runny nose
  - 3 month-old male with RPR of 1:8
  - Lumbar puncture:
    - WBC count = 3 WBC/mm$^3$
    - CSF protein = 58 mg/dL
  - No long bone X-ray data available

* All persons and events depicted in this case study are fictitious. Any similarity to actual persons, living or dead, or events is absolutely unintentional.
Is this child’s serology consistent with a diagnosis of congenital syphilis?
Answer: Yes, non-treponemal (+)

Child *does* have a reactive non-treponemal test result

- Titer of 1:8
- Child does *not* have a reactive treponemal test
- Case definition (9/1996) requires reactive treponemal test, *however*
  - Before reverse sequence testing, would have reactive non-treponemal test first
  - Current treatment guidelines do *not* recommend screening infants/children with treponemal test (would reflect maternal serology)*

* MMWR Recomm Rep. 2010 Dec 17;59(RR-12):1-110
Infant/Child Criteria Algorithm

Infant/child, placenta, or umbilical cord had (+) darkfield, (+) DFA, or (+) special stains examination?

NO/Unknown/not done

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) **

Consistent with treatment guidelines

YES

Probable case by infant/child criteria (report)

Non-reactive/not done/unknown

Confirmed case by infant/child criteria (report)

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

Reactive

Infant/child has ANY one of the following:
- Physical signs of CS
- Evidence of CS on long bone x-ray
- Reactive cerebrospinal fluid VDRL (CSF-VDRL)
- Elevated CSF WBC count or protein (without other cause) **

Consistent with treatment guidelines

NO/Unknown/not done

Not a case by infant/child criteria; evaluate mother (GO TO MATERNAL CRITERIA)*

* * 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.

* If case does not meet maternal or infant/child criteria, it is not a case of congenital syphilis
Next question:

Should this child be reported as a case of congenital syphilis?
Answer: Yes, physical signs (+) and elevated CSF protein

- Child has physical signs of CS
  - Snuffles (bloody runny nose)

- Child has elevated CSF protein
  - Child is > 30 days old
  - CSF > 40 mg/dl = “elevated”; child’s CSF = 58 mg/dl

- Only one finding is sufficient to qualify as a probable case of CS (here, there are two findings)

* MMWR Recomm Rep. 2010 Dec 17;59(RR-12):1-110
Reporting CS Case Data — Paper

- Currently reporting via hard copy (paper):
  - Use revised CS report form and instructions:
    - [http://www.cdc.gov/std/program/resources.htm](http://www.cdc.gov/std/program/resources.htm)
    - Or contact Ms. Darlene Davis (404-639-1838); [dwd1@cdc.gov](mailto:dwd1@cdc.gov)
Reporting CS Case Data — Electronically

- **Currently reporting electronically:**
  - Report data elements that are currently reported
  - Report new data elements when able
  - CDC transitioning to revised CS report form
    - Revised NETSS implementation plan pending in coming months
    - Working on accommodating new data elements

- **Questions about data elements?**
  - Contact John Su
    - 404-639-3526; ezu2@cdc.gov
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Thanks! And now, for some questions…

For more information please contact Centers for Disease Control and Prevention

John R. Su, M.D., Ph.D., M.P.H.
NCHHSTP/ Division of STD Prevention
Centers for Disease Control and Prevention
1600 Clifton Road, MS-E02
Atlanta, GA 30333
ezu2@cdc.gov
404-639-3526 (Office)
404-639-8610 (Fax)

1600 Clifton Road NE, Atlanta, GA  30333
Telephone: 1-800-CDC-INFO (232-4636)/TTY: 1-888-232-6348
E-mail: cdcinfo@cdc.gov  Web: http://www.cdc.gov

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