

2023 Vertical Prevention Guidelines

R.MAITHUFI

Syphilis

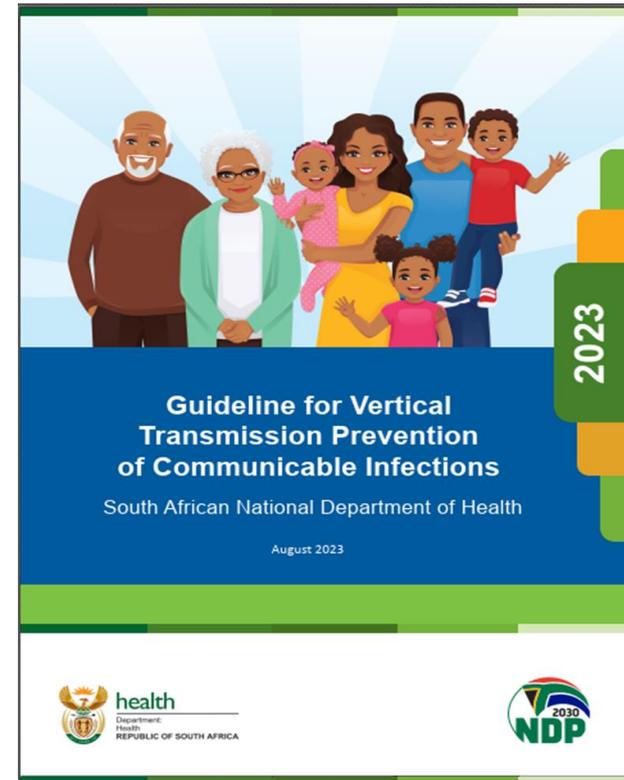


health
Department:
Health
REPUBLIC OF SOUTH AFRICA

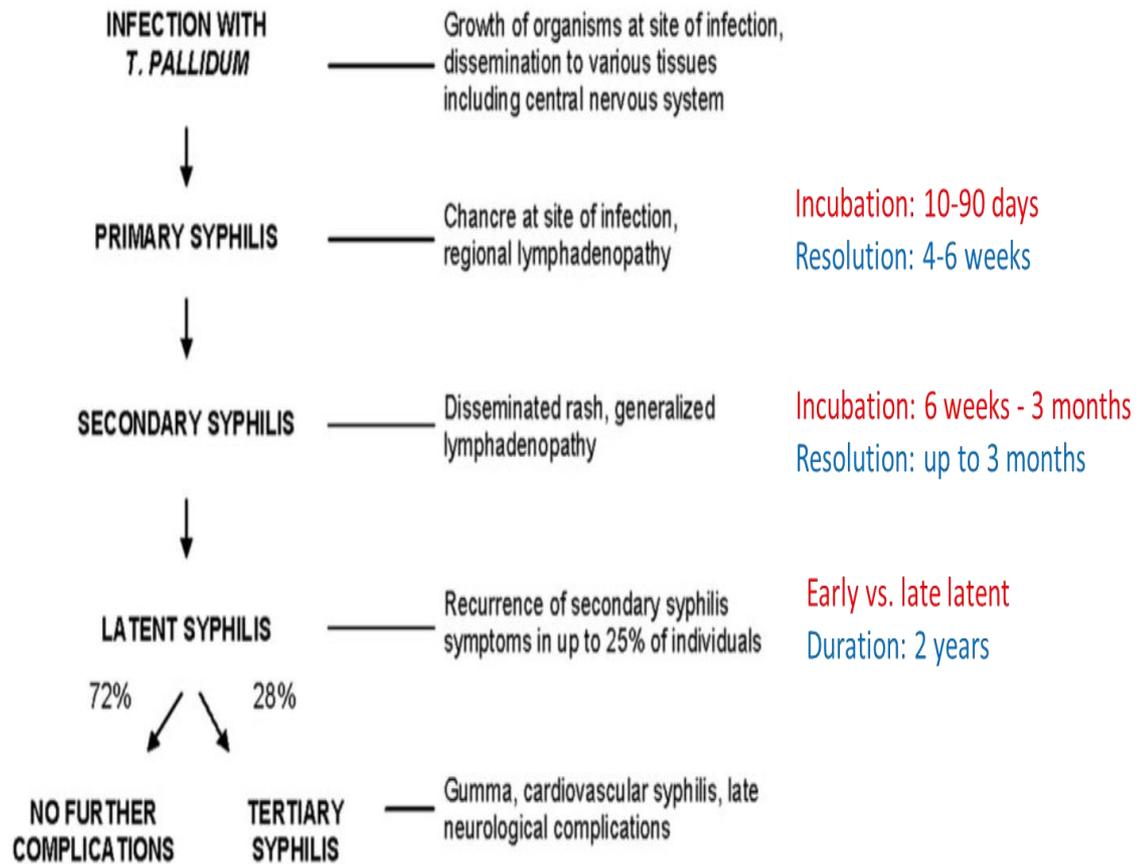


Vertical Transmission Prevention

Mother-to-child
transmission



Syphilis natural history



- *Treponema pallidum* subspecies *pallidum*



Mode of transmission



Sexual contact

Minor wounds

To fetus

Penetration of mucous membranes

Dermal micro-abberations

Bacteraemia



Resurgence of Syphilis in the Country

- Syphilis remains a significant cause of preventable perinatal death in SA.
- 2019 prevalence of syphilis is estimated at 2.6% (95% CI: 2.4%–2.9%)
- 30% increase in prevalence between 2015 and 2019
- Maternal syphilis screening coverage at first antenatal visit was 96.4% at national level.
- However, despite good antenatal attendance and early maternal syphilis testing, there has been a resurgence of congenital syphilis cases in many provinces in South Africa
- Adverse pregnancy outcomes occur in up to 80% of syphilis seropositive, untreated pregnant women
- South Africa has committed to dual elimination of both HIV and syphilis

Frequency testing

- **A pregnant woman should be screened and tested for syphilis at her 1st/booking visit in antenatal care. If she tests negative, syphilis testing should be repeated:**
 - Scheduled antenatal visits, at approximately 4-weekly intervals, e.g., for BANC+ clients, this could be at 20, 26-, 30-, 34-, and 38-weeks gestation
 - During her labor/delivery admission
 - At the time of diagnosis of an intrauterine death
 - At any time, if the mother has clinical symptoms or signs suggestive of syphilis
- **Syphilis testing should be aligned with the HIV testing schedule:**
 - If a woman tests positive for HIV, but tests negative for syphilis, repeat syphilis testing should continue at the intervals described above.
 - If a woman tests positive for syphilis but tests negative for HIV, repeat HIV testing should continue at recommended intervals

Types of syphilis tests and their uses: Rapid tests

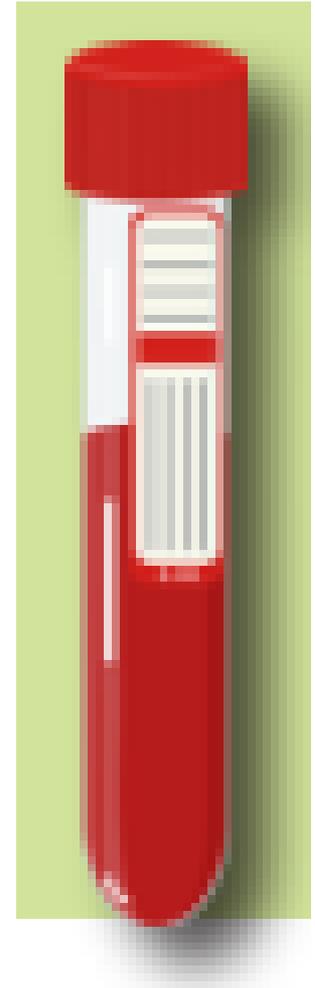
- Specific (or treponemal) test for syphilis
- Remain positive for life, even if the infection has been treated.
- **Positive rapid tests should be confirmed using an RPR test.**
 - The RPR will determine if the positive rapid result indicates a current active infection or an earlier infection, and
 - the baseline titre allows the response to treatment to be monitored
- **Once a woman has tested positive using a rapid test, a rapid test should no longer be used for routine screening to identify new infections at subsequent visits.**
 - A rapid test cannot differentiate between a new and previous infection.
 - An RPR should then be used as the screening test to identify new infections



Types of syphilis tests and their uses:

RPR

- Non-specific (or non-treponemal) tests
- Done in a laboratory.
- RPR titres change in response to treatment or disease progression.
- Used to confirm a positive rapid tests
 - The RPR will determine if the positive rapid result indicates a current active infection or an earlier infection, and
 - the baseline titre allows the response to treatment to be monitored

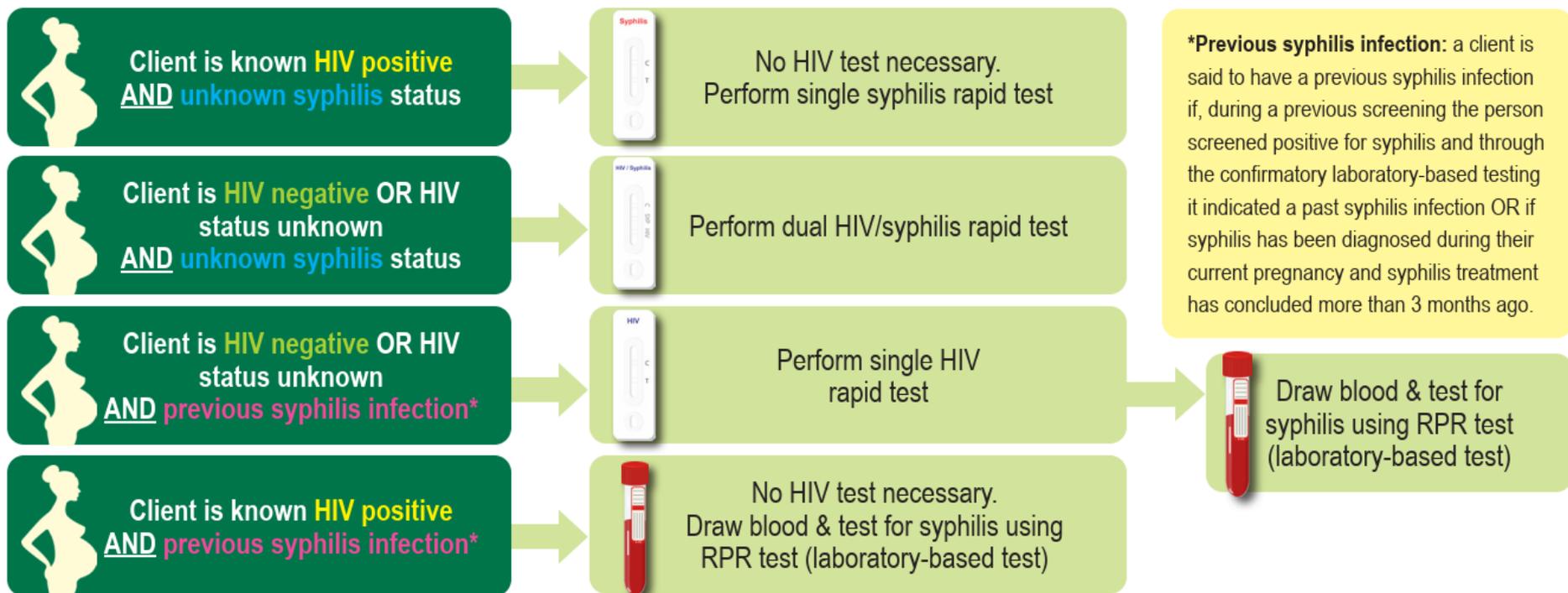


What to do when a facility does not have syphilis rapid tests in stock

- Rapid syphilis tests are available as a single rapid diagnostic test (RDT) that tests only for syphilis, and a dual RDT which tests for both syphilis and HIV using the same drop of blood.
- Dual syphilis and HIV rapid tests should only be used in clients
 - Whose HIV status is negative or unknown AND
 - Who have not had a previous syphilis infection

Clients who are already known to be living with HIV should NOT be re-tested for HIV and should therefore not use a dual syphilis and HIV rapid test!

Which test should be used when?



What to do when a facility does not have syphilis rapid tests in stock



Client is known **HIV positive**
AND **unknown syphilis** status

If NO single syphilis
RDTs available



No HIV test necessary.
Draw blood & test for syphilis using
RPR test (laboratory-based test)



Client is **HIV negative** OR HIV
status unknown
AND **unknown syphilis** status

If NO dual syphilis
RDTs available



Perform single HIV
rapid diagnostic test
+
Single syphilis
rapid diagnostic test

OR



Perform single HIV rapid
diagnostic test
+
Draw blood & test for
syphilis using RPR test
(laboratory-based test)



SYPHILIS RAPID DIAGNOSTIC TESTING

Single syphilis rapid test



Dual HIV syphilis rapid test



Interpretation for syphilis component of the dual test

Perform **syphilis** rapid test
Assess for clinical signs of syphilis & counsel on condom use.

Screening test:
Syphilis REACTIVE

Treat: **Penicillin Dose 1***

Confirm the syphilis diagnosis:
Send a single blood sample* to the laboratory requesting an RPR test
A note should be added to the specimen request form as follows:
"If the RPR result is negative, the lab should proceed to do a specific syphilis test on the same blood specimen"
Ask the client to return in 1 week for results.

* If other blood tests are also being requested, e.g. an HIV VL, send the syphilis sample with its own specimen request form to prevent delays in processing of the test.

Screening test:
Syphilis NON-REACTIVE

Syphilis Negative

No current & no previous syphilis infection

RPR NON-REACTIVE

AND

Lab-based specific syphilis test
NON-REACTIVE

Syphilis Negative

No current & no previous syphilis infection

Continue routine screening for syphilis using: **rapid tests**

RPR NON-REACTIVE

AND

Lab-based specific syphilis test
REACTIVE

Syphilis Negative

No current active syphilis infection
Positive specific test indicates past infection

Continue routine screening for syphilis using: **RPR tests.**
Do not use rapid tests as, once positive, it remains positive for life

RPR REACTIVE

Syphilis Positive

Counsel: that a diagnosis of syphilis is confirmed

Treat: **Penicillin dose 2***

Document: RPR titre

Trace & test sexual partners

Schedule: **Penicillin 3rd dose in 1 week**

Treat: **Penicillin dose 3***

Repeat RPR titre 3 months after treatment completion to **confirm response to treatment⁵**

5 Confirm response to syphilis treatment:

- A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).
- Do not re-check RPR until at least 3 months after treatment is completed.
- If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.
- A low titre may take years to disappear completely.
- Only be concerned if there is a rise in titre compared to the initial low titre.

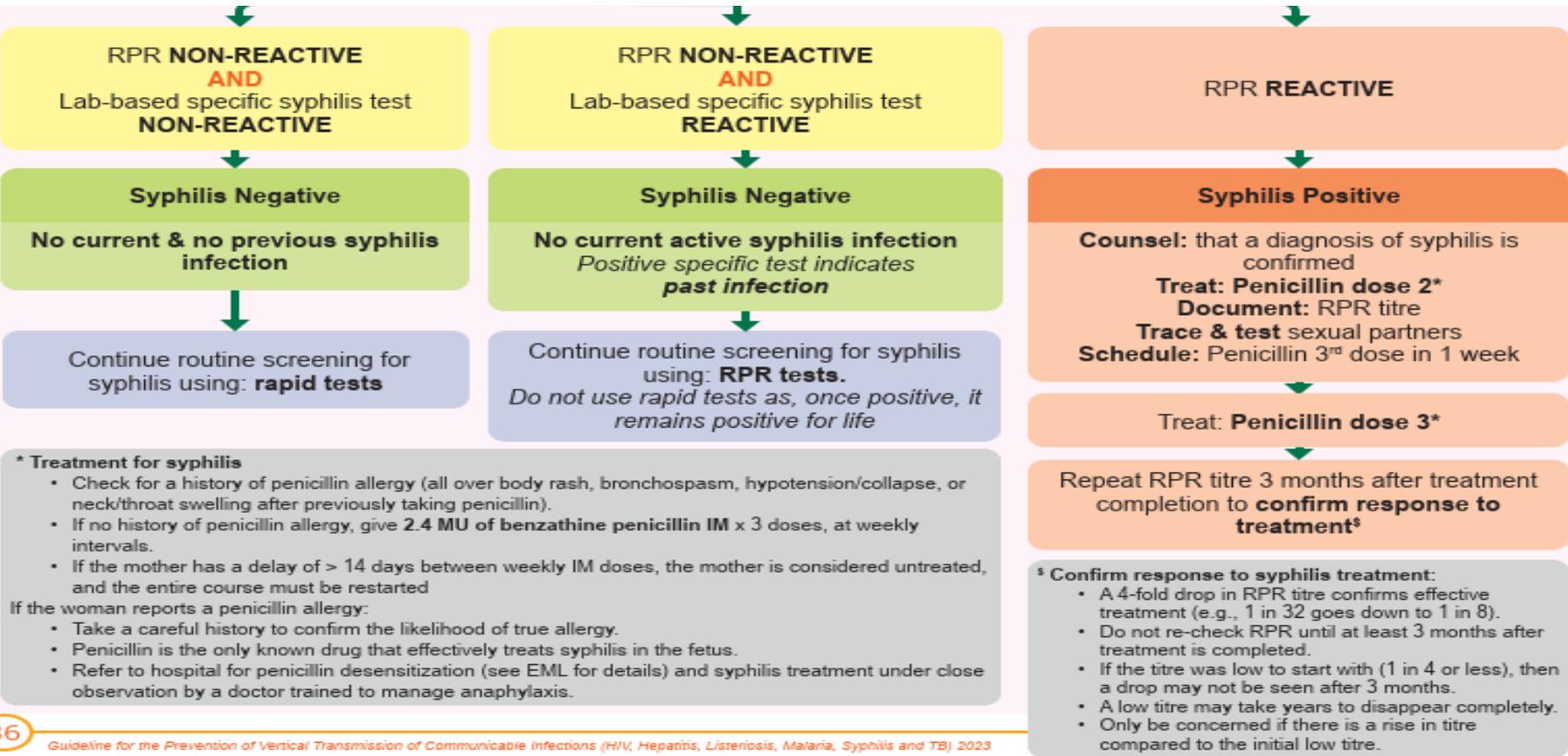
* Treatment for syphilis

- Check for a history of penicillin allergy (all over body rash, bronchospasms, hypotension/collapse, or neck/throat swelling after previously taking penicillin).
- If no history of penicillin allergy, give **2.4 MU of benzathine penicillin IM x 3 doses**, at weekly intervals.
- If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted.

If the woman reports a penicillin allergy:

- Take a careful history to confirm the likelihood of true allergy.
- Penicillin is the only known drug that effectively treats syphilis in the fetus.
- Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.

Continuation



*** Treatment for syphilis**

- Check for a history of penicillin allergy (all over body rash, bronchospasm, hypotension/collapse, or neck/throat swelling after previously taking penicillin).
- If no history of penicillin allergy, give **2.4 MU of benzathine penicillin IM** x 3 doses, at weekly intervals.
- If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted

If the woman reports a penicillin allergy:

- Take a careful history to confirm the likelihood of true allergy.
- Penicillin is the only known drug that effectively treats syphilis in the fetus.
- Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.

§ Confirm response to syphilis treatment:

- A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).
- Do not re-check RPR until at least 3 months after treatment is completed.
- If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.
- A low titre may take years to disappear completely.
- Only be concerned if there is a rise in titre compared to the initial low titre.

Confirm response to syphilis treatment

A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).

Do not re-check RPR until at least 3 months after treatment is completed.

If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.

A low titre may take years to disappear completely.

Only be concerned if there is a rise in titre compared to the initial low titre.

Treatment for syphilis

- **Check for a history of penicillin allergy**
 - All-over body rash, bronchospasm, hypotension/collapse, or neck/throat swelling after previously taking penicillin
- **If no history of penicillin allergy, give**
 - 2.4 MU of benzathine penicillin IM x 3 doses, at weekly intervals
- **If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted**
- **If the woman reports a penicillin allergy:**
 - Take a careful history to confirm the likelihood of true allergy.
 - Penicillin is the only known drug that effectively treats syphilis in the fetus.
 - Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.



Send a single blood sample* to the laboratory requesting an RPR test
 A note should be added to the specimen request form as follows:
 If the RPR titre result is 1:4 or less, the lab should proceed to do a **specific syphilis test** on the same blood specimen

Assess for clinical signs of syphilis & counsel on condom use.
Ask the client to return in 1 week for results.

* If other blood tests are already being requested, e.g. an HIV VL, send the syphilis sample with its own specimen request form to prevent delays in processing of the test



Syphilis Positive

Counsel: that a diagnosis of syphilis is confirmed
Treat: Penicillin dose 1*
Document: RPR titre
Trace & test sexual partners
Schedule: Penicillin 2nd dose in 1 week

Treat: Penicillin dose 2* / Schedule: Penicillin 3rd dose in 1 week

Treat: Penicillin dose 3*

Repeat RPR titre 3 months after treatment completion to **confirm response to treatment**[§]

Syphilis Negative

No current syphilis infection
 Continue routine follow-up screening for syphilis.

§ Confirm response to syphilis treatment:

- A 4-fold drop in RPR titre confirms effective treatment (e.g., 1 in 32 goes down to 1 in 8).
- Do not re-check RPR until at least 3 months after treatment is completed.
- If the titre was low to start with (1 in 4 or less), then a drop may not be seen after 3 months.
- A low titre may take years to disappear completely.
- Only be concerned if there is a rise in titre compared to the initial low titre.

*** Treatment for syphilis**

- Check for a history of penicillin allergy (all over body rash, bronchospasm, hypotension/collapse, or neck/throat swelling after previously taking penicillin).
- If no history of penicillin allergy, give 2.4 MU of benzathine penicillin IM x 3 doses, at weekly intervals.
- If the mother has a delay of > 14 days between weekly IM doses, the mother is considered untreated, and the entire course must be restarted

If the woman reports a penicillin allergy:

- Take a careful history to confirm the likelihood of true allergy.
- Penicillin is the only known drug that effectively treats syphilis in the fetus.
- Refer to hospital for penicillin desensitization (see EML for details) and syphilis treatment under close observation by a doctor trained to manage anaphylaxis.

Congenital syphilis

- 30-40% of babies who acquire syphilis in-utero, die shortly before or after birth
- 2 considerations:
 - Babies' clinical symptoms
 - Mother's treatment status

Syphilis symptoms in the newborn



Seizures



Jaundice, Hepatomegaly



Splenomegaly



Long bone changes



Pallor, Petechiae



Large, pale, greasy placenta



Growth restriction



Peeling Rash, Oedema
Nonimmune fetal hydrops



Loss of eyebrows, chorioretinitis,
uveitis, cataract, glaucoma



Nasal discharge ("snuffles")



Pneumonia



Myocarditis



health

Department:
Health
REPUBLIC OF SOUTH AFRICA



Definition - Inadequately or untreated mother:

Inadequately treated mother

- Mother did not complete three doses in full, or
- Mother received three doses but there was a delay of > 14 days between weekly IM doses, or
- Last dose was not more than 30 days before delivery, or
- Dose that the mother received was incorrect

Untreated mother:

- Mother did not receive any treatment for syphilis, or
- Mother was treated for syphilis with an antibiotic that was not penicillin

Mandatory notification for congenital syphilis

- **Category 2 Notifiable Medical Condition (NMC):**
 - Health care workers must notify all cases of congenital syphilis within 7 days of diagnosis.
- **Stillbirths due to syphilis should also be notified.**
 - Remember to test or re-test all negative mothers with stillbirths or miscarriages for syphilis at the time of presentation