Syphilis in pregnancy and the neonate
Clinical Guideline

Directorate of Women’s Health
Ministry of Health
Trinidad and Tobago
March 2020
The Directorate of Women’s Health was created at the Ministry of Health to improve maternal and perinatal outcomes and address international targets for Trinidad and Tobago in achieving the milestones along the way to the Sustainable Developmental Goals, 2030. This document is one such response in order to create standardized clinical guidelines related to Obstetrics and Gynaecology. The team in our unit of Research and Audit were the driving force behind the creation and finalization of this document.

In line with the Sustainable Developmental Goals 2030-Agenda and the Global Strategy for Women’s, Children’s and Adolescent’s Health (2016-2030), this document supports the objectives of “Survive, Thrive and Transform” by promoting the reduction of maternal and perinatal morbidity and mortality.

**EMTCT Plus Agenda**
Since 2010, PAHO Member States have committed to the dual elimination of mother-to-child transmission of HIV and syphilis. A “Plan of Action 2016-2021” was agreed upon, however this plan was and is still not widely known by the key stakeholders in Trinidad and Tobago. Much progress has been made in the past with the existing programs, but supportive data, written documents and coordination are areas for improvement. The Directorate of Women’s Health has now assumed the lead policy and steering role at the MOH in this area.

We used an ‘adopt and adapt’ method in the production of this guideline based on existing resources and expertise. Consensus was obtained from recognized multidisciplinary stakeholders based on the evidence and publications at the time of producing this document.

By specifying standards as simple Good Practice Points, this guideline aims to an improved, integrated, and controlled syphilis screening and care approach for all pregnant women and newborns in Trinidad and Tobago.

This document provides updated information that was previously not contained or specified in the Ministry of Health’s Standard Operating Procedure (SOP) Manual for Obstetric and Midwifery Services (June 2011) and the Maternal and Child Health (MCH) Manual (2015). All other sections and updated clinical guidelines on other topics remain in force.

**Acknowledgements**
The Directorate wishes to recognize the contributions from all stakeholders especially Dr. Andres Freiberg and the staff at the Queen’s Park Counselling Centre and Clinic (QPCC&C) who were instrumental in developing this document.

The work of the team from the Corporate Communications department in finalizing this publication is also acknowledged.

Dr. Adesh Sirjusingh
Director, Women’s Health
Accountability of this Document

This Clinical Guideline was developed by the Directorate of Women’s Health, Ministry of Health, Trinidad and Tobago. This publication is one of several that seeks to standardize the delivery of Obstetrics and Gynaecology-services at both public and private health care facilities. It was developed based on the Ministry’s principles of accessibility, equity, affordability, efficiency, effectiveness and safety.

Control

The senior management including the Chief Executive Officers of the RHAs, Executive Medical Directors, Medical Directors, County Medical Officers of Health, Medical Chiefs of Staff, General Managers of Nursing, Primary Care Managers, and Heads of Departments have the overall responsibility for the dissemination, staff education, implementation of and compliance with this guideline.

Distribution

The guideline is to be distributed to all relevant health facilities where obstetric and midwifery services are provided and to the Queen’s Park Counselling Centre and Clinic.

Review Cycle

The Guideline will be reviewed on a three-year cycle and updated where necessary, including at earlier intervals if warranted. Unless recalled by the Ministry of Health, the Guideline will remain in force however.

Earlier versions

Any earlier version of this document should be archived for use by the health facility as a reference document.

Clinical disclaimer

The recommendations in this guideline were arrived at after consideration of the existing evidence available. When exercising their clinical judgement, professionals are expected to take this guideline fully into account, along with the individual needs, preferences and values of their patients or service users. The application of the recommendations in this guideline do not always dictate an exclusive course of action as we recognize that individual clinical circumstances will require an individualized approach at times. Major deviations from these recommendations however, are to be documented in the patient’s case records including the reason(s) for doing so.

Approval date  March 11th 2020

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Director, Women’s Health                        Chief Medical Officer

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Permanent Secretary                             Hon. Minister of Health
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<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>AIDS</td>
<td>Acquired immune deficiency syndrome</td>
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<tr>
<td>AMR</td>
<td>Antimicrobial resistance</td>
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<td>ANC</td>
<td>Antenatal care</td>
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<td>ART</td>
<td>Antiretroviral therapy</td>
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<td>ARV</td>
<td>Antiretroviral</td>
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<td>BFP</td>
<td>Biological false positive</td>
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<td>BPG</td>
<td>Benzathine Penicillin G</td>
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<td>CS</td>
<td>Congenital syphilis</td>
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<td>DHV</td>
<td>District Health Visitor</td>
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<tr>
<td>EMTCT</td>
<td>Elimination of mother-to-child transmission</td>
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<td>Female Sex Workers</td>
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<td>Gender based violence</td>
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<td>GRADE</td>
<td>Grading of Recommendations Assessment, Development and Evaluation</td>
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<td>HIV</td>
<td>Human immunodeficiency virus</td>
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<td>Maternal and Child Health</td>
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<td>M&amp;E</td>
<td>monitoring and evaluation</td>
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<td>Pan American Health Organization</td>
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<td>PCR</td>
<td>Polymerase chain reaction</td>
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<td>PMTCT</td>
<td>Prevention of mother-to-child transmission</td>
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<tr>
<td>PWLHIV</td>
<td>Pregnant women living with HIV</td>
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<tr>
<td>QPCC&amp;C</td>
<td>Queen’s Park Counselling Centre and Clinic</td>
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<td>RPR</td>
<td>rapid plasma reagin</td>
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<td>SIP</td>
<td>Perinatal Information System</td>
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<td>SMO</td>
<td>Specialist Medical Officer</td>
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<td>SOP</td>
<td>standard operating procedure</td>
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<td>STI</td>
<td>sexually transmitted infection</td>
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<td>TPPA</td>
<td>Treponema pallidum particle agglutination assay</td>
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<td>VDRL</td>
<td>Venereal Diseases Research Laboratory</td>
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<td>WHO</td>
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1.0 Executive Summary

Syphilis in pregnancy can lead to serious consequences to mother and baby if left untreated. This guideline sets basic standards, presented as good practice points, in the areas of testing, communication, diagnosis, treatment and reporting.

Scope

This document is limited to:

The management of syphilis during pregnancy and the immediate care of syphilis-exposed newborns.

It does not change the existing pathways in long-term follow-up by existing specialist paediatric-, STI- and/or partner- services, or contact tracing. Syphilis outside of the newborn period is outside the scope of this document.

Stakeholders

This document is aimed primarily at clinical staff, but includes action points for the support allied healthcare staff, as well as clerical and managerial staff and the data management systems. We all have a role to play in the prompt management of pregnant women affected by syphilis, and in the elimination of its mother-to-child transmission (EMTCT).

Key Points

- Syphilis in pregnancy must receive priority care in existing antenatal care programmes.
- The rule of thumb is “if in doubt, treat first”.
- The Queen’s Park Counselling Centre and Clinic (QPCC&C) remains the lead body responsible for coordination of stakeholders, long-term follow-up, contact tracing, and holistic management of sexually transmitted infections (STIs).
- The direct clinical responsibility for treating syphilis during pregnancy no longer falls under the QPCC&C, but under the RHA that is responsible for the overall antenatal care of the same patient.
- The patient will no longer be required to navigate the health system and liaise or present herself to a separate QPCCC&C facility in order to receive treatment.
- Every pregnant woman with confirmed (or in some cases, suspected) syphilis should be offered Benzathine penicillin G (BPG) injections at her local Regional Health Authority’s (RHA) maternity unit for both initial and, when indicated, subsequent doses.
The health system must ensure that there is a structured and an improved level of communication between the RHA's maternity service delivery points, maternity units, neonatal services, and the QPCC&C.

Maternity units are to consult with the expertise at QPCC&C on syphilis stage and/or past treatment determination, and in turn, QPCC&C should be made aware of treatment dates. At the end of this care pathway, all parties should know the outcomes of mothers and babies.

The second test for screening for syphilis in pregnancy must be completed before 34 weeks of gestation to allow enough time for management of positive cases.

The Perinatal Information System (SIP) national system was mandated for universal use at all RHAs as of August 2018. Report sharing between experienced providers is needed to avoid disjointed, disordered or duplicated care. The Ministry of Health (MOH) through the RHAs, the Directorate of Women’s Health (DOWH) and the QPCC&C are to ensure the mandatory use of the SIP at the relevant sites.

This guidance starts from tests and service arrangements existing at the time of writing. Further modifications will be required if validated point-of-care testing is introduced in the future.

A general principle is that no screening should be initiated without all parties, including the pregnant woman, being aware of the steps ahead if the test turns positive.

National data, cost-benefit analysis and research are important to guide the introduction of changes to current patient care management algorithms. This program should form part of the agenda at the RHA and at the national level.

The office of the Manager, Audit and Research at the Directorate of Women’s Health is the designated lead in this area at the Ministry of Health.
2.0 Introduction

2.1 Congenital syphilis (CS) occurs when a pregnant woman with syphilis transmits the infection to her fetus during pregnancy or delivery, also referred to as mother-to-child transmission (MTCT). Congenital syphilis can lead to stillbirth or neonatal death, low birth weight or premature infants, as well as disorders in surviving infants such as blindness, deafness, other neurologic impairment, and classic bone deformities.\textsuperscript{1-4}

- Since individual cases might present diagnostic challenges, and syphilis is a public health problem, there are two case definitions of CS, a surveillance case definition, and a clinical case definition. These may or may not coincide. Although all clinical cases will be surveillance cases as reported, not all surveillance cases will be clinical cases (see below). The attending paediatric team will use clinical definitions. This difference exists because the surveillance case definition intends not to define an individual case, but to arrive at population-level representative numbers of syphilis burden of disease in live births -real and potentially missed cases- and stillbirths, that can then be compared internationally, including with regions where precise individual data are not available.

- Case definition

A surveillance case definition of CS\textsuperscript{1} is a fetal death, stillbirth or live birth at >20 weeks of gestation or >500 grams, born to a woman with positive syphilis serology and without adequate - or unknown- syphilis treatment; OR, a live birth, stillbirth or child aged <2 years born to a woman with positive syphilis serology, or with unknown status, who after birth is found to have laboratory and/or radiographic and/or clinical evidence of syphilis infection (regardless of timing or adequacy of maternal treatment) such as:

- Demonstration by dark-field microscopy or fluorescent antibody detection of Treponema pallidum in the umbilical cord, placenta, nasal discharge or skin lesion microscopy or autopsy material in the neonate or stillborn
- Neonatal VDRL titre of fourfold or more than that of the mother taken simultaneously and by same laboratory, from baby blood (not cord blood)
- Newborn CSF reactive to VDRL and/or with elevated cell count or protein
- Radiological evidence highly suggestive of CS
- In follow up and later reporting, the infant's VDRL titres are less than fourfold more than that of the mother, but remain reactive ≥6 months after delivery
A clinical case definition includes the above signs, but is more thorough, because individual diagnosis can be difficult. Even when many cases might be asymptomatic, the neonatal/paediatric team, aware of maternal status and treatment record, makes the diagnosis. Teams typically look for the following early clinical signs: non-immune hydrops, hepatosplenomegaly, rhinitis (snuffles), skin rash (any types, look at palms and plants, as well as vesicles) pseudo-paralysis of an extremity (Parrot), condyloma lata, ostheochondritis, periostitis, IUGR, jaundice, anaemia, generalised lymphadenopathy, and possibly more. After the first week of life, the snuffles tend to become more obvious.

Later, during follow-up, an infant might fail to achieve developmental milestones, develop additional classic signs or symptoms such as frontal bossing, notched and pegged teeth (Hutchinson's teeth), clouding of the cornea, blindness, bone pain, decreased hearing or deafness, joint swelling, saber shins, and scarring of the skin around the mouth, genitals and anus. Late diagnosis' specifics fall outside of the scope of this perinatal guidance.

This guideline aims to an improved, integrated, and controlled syphilis screening and care approach for all pregnant women and newborns in Trinidad and Tobago, by specifying standards as simple Good Practice Points.

3.0 Good Practice: Testing

3.1 Routine screening tests for syphilis should be offered to all pregnant women twice during their Antenatal Care (ANC)

- First test at initial ANC visit, ideally during first trimester, as part of the current recommended panel of blood investigations (CBC, Hb Electrophoresis, Group Rhesus, HIV, Diabetes test, VDRL)
- Second test during the third trimester when HIV and other tests may also be repeated, no later than 34 weeks’ gestational age. This represents a change from the Maternal and Child Health Manual of the MOH (2015) and allows enough time for results and treatment to be offered prior to delivery

*aCurrently, VDRL is the standard local screening test for syphilis. Positive VDRL samples are tested with TPPA, and titres are recorded. It is expected that in the future, some facilities may offer evidence-based, rapid on-site tests while others may continue to use reference laboratories. A second screening test is recommended in populations at risk, and in general, to countries with an estimated overall yearly syphilis incidence equal to or higher than 2 cases per 1000 pregnant women.1,2*
3.2 Screening tests for syphilis should also be offered to women who

- Are planning a pregnancy in fertility clinics
- Disclose risk factors
- Reveal or are found in clinical records, to have tested positive for syphilis and/or other STIs in the past, whether treated or not
- Are pregnant but non-compliant, hard-to-reach, or presented late for ANC
- Present for delivery without a documented history of ANC
- Gave birth to a stillborn over 20 weeks’ GA and/or weighing over 500 g

*bPregnant women presenting later than at first trimester for first ANC-visit, are at higher risk of social and medical problems, including STIs. These pregnancies should be fast-tracked for testing and treatment. Attending staff will also be expected to liaise with social services and/or other services as deemed appropriate, including paediatrics, for managing the newborn. Migrants, vulnerable/isolated populations, and PWLHIV are especially at risk.  

cAll mothers of stillborn babies within parameters above should be screened for syphilis.

3.3 All pregnant women should be involved in decisions regarding their care

- Information regarding routine screening tests should be shared with pregnant women during their ANCs, including the importance of preventing mother-to-child transmission of STIs
- Those refusing to be tested or provide contact details should be counseled further and, if no engagement, consider referral to appropriate agencies for further support

3.4 A revised VDRL form is currently in press and will be available at all testing sites. This must be fully and accurately completed with the appropriate sample, to the VDRL testing site(s) (Appendix 1)

- Complete all data fields completely and accurately
- Appropriate means for uniquely identifying the client
- Include gestational age (GA) in weeks, at time of testing and mark “repeat test” if applicable
- Previous treatment and dates and VDRL titres
- On the day of testing, the client can be asked to provide a contact number if they wish to be contacted in this manner

*dThe new VDRL form is a modified version of the previous form, intended to speed up communication of positive results back to client and health facility. A new "EMTCT" area of data has also been added.
3.5 Testing laboratories should seek a strategy to meet accreditation standards, in compliance with existing requirements

- It is beyond the scope of this clinical guidance to specify the laboratory standard operating procedures (SOPs) and/or other steps leading to their accreditation
- All laboratories providing VDRL testing should enlist and aim to comply with quality and accreditation requirements as stated in relevant documents[^4]
- With the present algorithm, a reactive VDRL is tested with TPPA and titres are reported

*Trinidad and Tobago is working towards validation of its EMTCT programme of syphilis and HIV. Part of this effort will include scheduled visits to relevant laboratories, with a view to identifying gaps in SOPs and practices to address for future accreditation. Although it is important to mention this key point, it falls outside of the remit of this guideline to make specific recommendations for intra-laboratory procedures, or accreditation details. The implicit assumption is that a positive VDRL followed by a positive TPPA by existing methods in existing laboratories is consistent with a syphilis diagnosis locally, until proven otherwise.*[^3]

4.0 Good Practice: Communication

4.1 A positive result for syphilis in the laboratory must be fast-tracked back to the referring health facility

- Confirmed cases (VDRL and TPPA positive, or via a QPCC&C validated algorithm) must be flagged at source by the designated QPCC&C staff and immediately communicated back to the referring RHA.
- A "fast-track" mechanism must be in place for *positive* cases. QPCC&C and each RHA are mandated to develop secure inter-agency communication systems. One possible pathway is by using the contact data from the VDRL form, the designated QPCC&C officer is to:
  - Inform the clinical RHA staff at the originating health facility, that their patient whose sample was sent from their region/facility has tested positive[^5] and share the patient’s clinical information through existing confidential mechanisms of communication
  - Record the date of this communication
  - Use a sealed envelope to send positive reporting forms via expedited transportation (courier)
  - Liaise locally with STI Field Interviewers for contact tracing, if appropriate
- Until SIP is fully implemented at all centres (as mandated by the MOH from August 2018), the fastest way to communicate the need for further action is usually a direct staff-to-staff phone call. For this reason, it is essential that staff filling forms in the referring ANCs ensure complete the VDRL form completely and accurately.
4.2 If detected at the level of Primary Care, women should be referred to the secondary care maternity units for treatment.

Upon receipt of communication from the QPCC&C, the designated RHA-healthcare officer at the originating local health facility should arrange:

- Contact with the patient and invite her to attend the facility as next-day appointment, walk-in, or at her earliest convenience to discuss results in a confidential manner
- Flag this pregnancy as high risk, and arrange referral as per the MCHM
- Coordinate a referral to the secondary care maternity unit for treatment and follow up
- Use the National Obstetric Referral form (Appendix 2) -until SIP fully operational
- Make a record of referral in the local HC notes
- When the VDRL test report arrives at the health facility, a copy should be shared with the maternity unit
- The patient should be informed that a QPCC&C field interviewer may also attempt to contact her, for partner tracing

The responsible healthcare officer calling the patient should be cognizant of the syphilis programme and treatment details. There should be seamless transition of information communication regardless of personnel involved including when the assigned officer may be on leave etc. Results should be discussed firstly at the place of usual ANC, in an appropriate confidential manner. At this stage, it could be discussed that results are highly suggestive of syphilis. Then, as per the MCHM, arrange referral to the specialist maternity unit for final diagnosis, treatment and follow up.

Staff should use the fastest existing local referral arrangement including use of the Day Case Assessment Units, with staff alerted beforehand to expect the client.

The responsibility for initiation of care and feedback mechanisms lies with the RHA. Direct case management is to be led by the local maternity units.

The QPCC&C will oversee management, take an advisory role for complex cases and engage with partner tracing and management without displacing the client to attend and self-navigate multiple clinics at multiple sites, as this leads to sub-standard or delayed care and possible loss to follow up.
5.0 Good Practice: Diagnosis

5.1 The Specialist Medical Officer (SMO) at the local RHA-maternity unit is responsible for the coordination of confirming the diagnosis, discussing implications with their antenatal clients and the agreed treatment plan

- Maternity units are to liaise with the QPCC&C clinicians throughout
- A final diagnosis should be made under the direction of the SMO
- Diagnosis is usually based on compatible history, risk factors, clinical signs and/or available serology
- Most cases will be covered by this simple strategy; but, “if in doubt; treat first” with a single injection of BPG -as below

**Figure 1. Simplified testing algorithm for pregnant women**

RPR and/or reverse algorithm is not commonly used. On-site point of care dual testing, if available, would require updating this guidance.

Positive VDRL, especially with titres > 4 should be interpreted as possible syphilis, since endemic trepanomatoses (yaws, pinta) are locally uncommon. VDRL titres > 16 usually indicate active infection, but titres can be lower, so individual clinical assessment is paramount. Non-treponemal tests like VDRL are confirmed with TPPA locally.

Senior clinicians may decide on further tests, or use reverse algorithms, depending on availability. Some well-controlled cases, with clear records of past treatment, no new risk factors, and consistently low VDRL titres could be interpreted as treated “old” cases. Again, if in doubt, best practice is to exercise caution with syphilis, and “treat once”.
5.2 Maternity units will need to liaise with other services or agencies to offer integrated care

- Liaising with other services for holistic management is recommended\textsuperscript{2,3}
- These can include: QPCC&C clinicians and their field interviewers, contact tracers, DHVs/PMTCT\textsuperscript{8} nurses, Social Services, etc
- Special emphasis should be placed in assessing vulnerability, discovering undisclosed risk factors, and/or threats to the rights of the pregnant woman including the potential for sexual and gender-based violence

Improved communication is expected at all levels between QPCC&C and the RHA counterparts in delivering care for these pregnant women. Both parties are responsible for direct communication, sharing clinical information, cooperating with partner services, assessing disclosed and undisclosed risk factors, exposing gender-based violence and/or abuse, possible changes of names/address, co-existing conditions, and points of action to support pregnant women and their socio-economic situation.

\textsuperscript{8} At the RHA level, the PMTCT program is recommended to be strengthened in order to support their roles as key officers to coordinate communication and capture confidential data, as what exists in the HIV programme. The DHV or PMTCT nurse will not be responsible for contact tracing, administration of treatment or other clinical issues. This additional portfolio is expected to come with additional resources for these officers.

6.0 Good Practice: Treatment

6.1 Pregnant women who tested positive for syphilis should be offered counseling and treatment as soon as possible

- A pregnant woman who tested positive for syphilis before 18 weeks’ GA should be offered counseling and treatment no later than three (3) weeks from date of testing
- A pregnant woman found out to be syphilis positive after 18 weeks’ GA should be seen and offered treatment sooner than two (2) weeks from date of testing\textsuperscript{8}
- A pregnant woman found out to be syphilis positive after 32 weeks’ GA should be treated on the same-day with a single dose BPG, until more information is available

\textsuperscript{8} These are reference time frames. Testing date is recorded in the VDRL form. Most cases are expected to take less than this. The new form also provides the gestational age (GA) in weeks, facilitating audit. If testing occurred in the first trimester in ANC, then up to three weeks is a reasonable window for treatment, since most documented MTCT in syphilis occurs after 18 weeks’ GA. \textsuperscript{1,5} If testing occurred or was discovered as positive- later than 18 weeks into the pregnancy, the aim should be for treatment ASAP, and no later than two weeks after the testing date. If VDRL and TPPA are positive in the second screening test, or discovered in any pregnancy after 32 weeks’ GA, treatment should take place on the same - or following day (admit if necessary) and in all cases, before 36 weeks of the pregnancy.
6.2 In collaboration with the QPCC&C specialists, all pregnant women with probable active primary, secondary, or early-latent syphilis should be offered a single IM injection of Benzathine Penicillin G (BPG) 2.4 MU, through the local maternity unit

- The general aim is to “treat once” on clinical and serological evidence of syphilis\(^i\) without waiting too long for further information, or more precise staging is possible
- These are high-risk pregnancies: their ANC, including co-existing conditions, should be led by local RHA maternity units, shared with DHVs/PMTCT nurses, and in communication with the QPCC&C
- A pregnant woman suspected of having late-latent syphilis of possibly more than one-year duration should be offered three consecutive weekly doses of BPG 2.4 MU to a total of 9.6 MU\(^1,5\)
- Serial VDRL measurements should be used to assess response in all cases as guided by the QPCC&C
- In late-presenting cases, treatment should be provided prior to 30 days before delivery. If given beyond this, paediatric-services should be notified that the mother has received insufficient treatment\(^i\)
- A statement of “completion of treatment” should be issued by maternity units as coordinated with the QPCC&C
- All syphilis cases are to be notified to public health authorities; depending on local arrangements (see 8.0 below) and flagged to the paediatric team for post-natal VDRL and clinical follow-up

\(^i\) Experienced clinicians may, of course, decide to wait on further information or tests to arrive until issuing treatment. Variations in practice are not to be held against practitioners provided the overall care the pregnant woman received was better than the baseline stated on this guidance. Some clinicians might decide to use an intermediate regime of two BPG 2.4 MU injections. Neonatal units would need to follow local protocols.

These simple process changes are designed to avoid delays potentially occurring in the present care pathway. For instance, during transport of the samples and forms with the test results (the courier systems) and/or during collection of reports at a central RHA laboratory until notification to the local HC where the ANC takes place. In general, it is not desirable that pregnant women learn of their positive syphilis status only when attending their next ANC, then to be referred to a general STI clinic at the QPCC&C for management, especially if they already attend ANC irregularly.

With the current practice, the QPCC&C is where the original positive results are first known, a possible delaying system loop occurs, from and to the RHAs, and then back again to QPCC&C- for treatment and follow up. The key objective is therefore a more integrated service at primary care level and accelerated time-to-treatment for all syphilis-positive pregnancies.

At a population level, the benefits of a “treat once” approach outweigh potential problems.\(^2,3\)
6.3 Pregnant women should not be made to travel excessively, wait too long, or return many times until they access treatment, as this increases risk of loss to follow-up and/or late-incomplete regimes

- Local maternity units are to coordinate day-case or timed appointments for treatment. This can be via their existing Day Care Units
- Primary Care and Secondary Care must have clear established communication systems with referral and feedback mechanisms
- The pregnant woman should receive clear explanations as to what to expect in such appointments, and when she is due to come back for follow-up

6.4 In collaboration with the QPCC&C (as there is no official recommendation for treating syphilis in pregnant women other than with BPG), but facing this difficult situation,\(^8\)\(^\text{-}\)\(^\text{11}\) the clinician may opt for

- Ceftriaxone 1 g IM injection daily for 10-14 days -in some cases, consider admission or day-case for same regime IV, in view of practical difficulties, painful repeated injections, and possible non-compliance (AND)
- Azithromycin 2 g orally once (OR) Erythromycin 500 mg orally four times a day for 14 days
- Doxycycline must not be used in pregnancy
- These pregnancies should be classed as insufficiently treated and monitored for VDRL titres response on a monthly basis
- If titres elevate more than 2 dilutions (e.g. from 1:16 to 1:64) between tests, suspect non-response and treat again\(^10\),\(^\text{11}\)
- Liaison with paediatric-services for post-natal follow up is mandatory: neither of the above alternatives is suitable for treating the fetus
- The post-natal follow up of these cases is the same as if mother was untreated

6.5 Dedicated stocks of BPG must be reserved for this EMTCT Syphilis programme and not used to treat other clinical conditions where there are recognized effective alternative treatment algorithms. The stock must be embargoed and only used on the direction of the SMO.

- Local maternity units should make arrangement to prevent stock-outs of BPG\(^j\)
- Regional shortages of BPG have occurred\(^10\),\(^\text{12}\)
- The current estimated yearly usage of BPG (2.4 MU / 4 ml vials) -if used exclusively in pregnancy- is unlikely to be over 300 vials in Trinidad and Tobago
- Local pharmacists should follow RHA procedures to ensure advance notification of supply chains and avoid stock-outs
The Benzathine form of Penicillin G (BPG) has been in short supply, in international markets. This is due to a combination of factors, including low market priority (off-patent medication, sold at a very low price, about USD 0.20 per 2.4 MU) low incentive to manufacture (sterile conditions require significant financial investment in specialised manufacturing infrastructure) concerns about quality, minimum purchase order quantities (pooled procurement is recommended, but in practice, difficult to coordinate) and occasional shortage of components. The RHA’s lead pharmacist should be mindful that stock outs are likely and make necessary arrangements to notify this to relevant authorities. The MOH’s Chief Pharmacist is to ensure that an equitable and evidence-based distribution of BPG occurs based on data. Whatever the mechanism, the common objective is that no pregnant woman affected by syphilis goes without her BPG treatment.

7.0 Good Practice: Care of the Newborn

There are many variants and complexities on diagnosis and management of CS in individual cases, and hence these newborns should be evaluated by experienced pediatricians / neonatologists.

Below are the essential basic steps that the attending neonatal team (with obstetrics = perinatal team) would be expected to perform in these cases

Only early congenital syphilis essential management is discussed

7.1 All children born to mothers with positive treponemal serology in the current pregnancy require expert clinical evaluation and syphilis serology tests

- Staff attending the delivery should know the syphilis status and date(s) of past treatment(s) of the mother and communicate it to the neonatal team same day. This should be recorded in the notes and the SIP for the mother-and-baby pair.
- Potential exceptions include a mother with confirmed biological false positive, and/or documented maternal syphilis cured before this pregnancy. If in doubt, or information is unclear, admit, investigate (and eventually treat) the baby.

- In a low-risk normal delivery with an asymptomatic baby\textsuperscript{12,13}
  - Take VDRL titres from mother and baby (not cord blood) and send simultaneously. If available, request quantitative TPPAs for both and IgM EIA on baby
  - Examine baby for signs as above, sample any lesions for microscopy, if available
  - Obtain CSF for VDRL, and consider X-rays, eye exams, LFTs, CBC, RFTs
  - Admit and observe, counsel the mother, allow breastfeeding if no other contraindication

- A high-risk or preterm delivery adds to the underlying syphilis management. The infant might need further evaluation\textsuperscript{14}

- Some cases are diagnosed later, when VDRL at 3 months increases four-fold or more, and, in a minority, when TPPA serology is still positive after 18 months

- If mother presented at delivery without documented ANC, baby should not be discharged until maternal serology (syphilis included) is available
7.2 The paediatric team might make a diagnosis of congenital syphilis with clinical signs and known exposure AND/OR when IgM EIA is positive, a four-fold mother/baby VDRL -or TPPA- titres difference is found, and/or with positive CSF VDRL. Depending on existing protocols, consider
- Discussing with mother, offer treatment and arrange follow-up
- Treating baby with aqueous crystalline penicillin G 100,000–150,000 U/kg/day, administered as 50,000 U/kg/dose IV every 12 hours during the first 7 days of life and every 8 hours thereafter for 10-15 days OR procaine penicillin G 50,000 U/kg/dose IM in a single daily dose for 10-15 days\(^5,15\)
- If low-risk (asymptomatic, VDRL less than four-fold of mother, possible evidence of maternal treatment, no possibility of re-infection), consider not treating, or, if in doubt, consider using BPG 50,000 U/kg on a single IM injection and follow up as below\(^15\)

7.3 All infants born to mothers diagnosed and/or treated for syphilis during the present pregnancy require VDRL at birth and at 2 to 3 months of age, then three monthly until negative\(^1,8,15\)
- If these titres remain stable or increase, the child should be recalled and evaluated
- Untested older siblings should be called for examination and/or testing
- Paediatric teams should still refer to local protocols for further follow-up, as this guidance covers suggested perinatal action points only

8.0 Good Practice: Audit & Reporting
- A system of active surveillance should be ensured for syphilis in pregnancy, to facilitate periodic reporting on a core set of indicators
- All stakeholders must ensure that SIP is fully operational to link patients and clinical staff
- Existing test records of positive VDRL and TPPA should be incorporated into electronic database at source laboratory with specific codes for pregnant women
- Anonymized and encrypted versions of this electronic file should be available to share with authorized users upon request
- Information should make it possible for health officers to link mother-and-baby pairs, at RHA management, PHOs and at the MOH level
- Staff involved in data reporting should use their official (corporate) emails for internal communication
- Auditable standards and compliance (100%) will be utilized regarding the performance indices contained in this document
Fig 2. Patient centred approach (patient journey) and simple reporting flow diagram.

Pregnant women transit along a timeline of ANCs. The QPCC&C should report data on positive tests on pregnant women monthly to the DOWH for triangulation. The RHA should use existing reporting to local health centres (place of usual ANC) to local PHOs and upwards to the DOWH. Maternity units share mother’s data with neonatal units and neonatal units should, in turn, feedback outcomes to local health centres and to the DOWH. A standardized reporting form for the EMTCT syphilis programme was issued to all the RHAs, and the periodicity is monthly (Appendix 3). This allows active surveillance by DOWH for all treated pregnancies. Once fully operational, electronic SIP will complement and simplify data sharing.

9.0 References

5. PAHO/WHO EMTCT Secretariat (2017) Validation of Elimination of Mother to Child Transmission of HIV and congenital syphilis in the Americas. Methodology and tools for laboratory data assessment
11. See https://www.researchgate.net/publication/329454310_Utilizacion_de_penicilina_benzatinica_como_tratamiento_para_la_prevencion_de_sifilis_congenita_en_el_primer_nivel_de_atencion_de_la_salud in Spanish for the shortage management in Argentina
# Queen's Park Counselling Centre and Clinic (QPCC&C)

## National Venereal Disease Research Laboratory Test (VDRL) Form

This form is to be completed in DUPLICATE and in BLOCK LETTERS ONLY.

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinic Number</strong></td>
<td><strong>Ethnicity</strong></td>
</tr>
<tr>
<td><strong>DOB</strong></td>
<td></td>
</tr>
<tr>
<td><strong>AoB</strong></td>
<td></td>
</tr>
<tr>
<td><strong>DD</strong></td>
<td></td>
</tr>
<tr>
<td><strong>MM</strong></td>
<td></td>
</tr>
<tr>
<td><strong>YYYY</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
</tr>
<tr>
<td><strong>SEX</strong></td>
<td></td>
</tr>
<tr>
<td><strong>M</strong></td>
<td></td>
</tr>
<tr>
<td><strong>F</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Address</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Previous Treatment</strong></td>
<td><strong>Previous Test Date</strong></td>
</tr>
<tr>
<td><strong>Drug/Dosage</strong></td>
<td></td>
</tr>
<tr>
<td><strong>PREGNANCY</strong></td>
<td><strong>Antenatal Screening?</strong></td>
</tr>
<tr>
<td>First</td>
<td>Second</td>
</tr>
<tr>
<td><strong>Stillbirth/Fetal death &gt; 20 weeks and/or 500g</strong></td>
<td>Last Menstrual Period</td>
</tr>
<tr>
<td><strong>DATE OF REPORT</strong></td>
<td></td>
</tr>
</tbody>
</table>

**Sample Submitted:** BLOOD ☐ CEREBROSPINAL FLUID (CSF) ☐

**Reason for Test:** Symptoms (diagnostic) ☐ Routine ☐ Treatment Control ☐ Occupational Health ☐ Other ☐

**Patient Consent (VERBAL)**

I agree ☐ I do not agree ☐ to be contacted on (phone number) .................................................. OR .................................................. if it is necessary to arrange a confidential meeting for test results.

**OK to CALL?** Yes ☐ No ☐

(Spanish) Consiento a que me llamen al numero de arriba, si fuese necesario arreglar una entrevista confidencial por los resultados del test

**HEALTH FACILITY................................................./......RHA**

**REQUESTED BY**

**& Phone................................................... (to contact if results positive )**

**Date of Test** DD MM YYYY

---

**QPCC&C REPORT (AFFIX RESULTS’ STAMPS IN BOX ABOVE)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Blood</strong></td>
<td></td>
</tr>
<tr>
<td><strong>CSF</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Lab No</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Test not done/Tube Broken</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Haemolyzed</strong></td>
<td>Lab accident</td>
</tr>
<tr>
<td><strong>Insufficient for testing</strong></td>
<td>Other</td>
</tr>
<tr>
<td><strong>Authorizing Signature</strong></td>
<td>(QPCC&amp;C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>VDRL</strong></td>
<td><strong>TPPA</strong></td>
</tr>
<tr>
<td>Non - Reactive</td>
<td>0</td>
</tr>
<tr>
<td>Weakly Reactive</td>
<td>0</td>
</tr>
<tr>
<td>Reactive</td>
<td>0</td>
</tr>
<tr>
<td>dils=</td>
<td></td>
</tr>
<tr>
<td><strong>QPCC &amp; C STAFF</strong></td>
<td></td>
</tr>
<tr>
<td>patient contacted ?</td>
<td>Y ☐ N ☐</td>
</tr>
<tr>
<td>health facility contacted ?</td>
<td>Y ☐ N ☐</td>
</tr>
</tbody>
</table>

**DATE OF REPORT** DD MM YYYY
**NATIONAL OBSTETRIC- REFERRAL FORM**

Jan 2020/ANC Referral Form/Directorate-Women’s Health

REG NO/ID____________________

[This line is for internal RHA-USE ONLY: PLEASE GIVE Appointment within ............................................ week(s)]

(Criteria adapted from MOH MCH Manual 2015)

<table>
<thead>
<tr>
<th>NAME ___________________</th>
<th>AGE ______</th>
<th>TEL NO (s) ______</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRAVIDA_______ PARA______</td>
<td>LMP _______</td>
<td>EDD ____________</td>
</tr>
<tr>
<td>POG_________ weeks</td>
<td>SURE ☐</td>
<td>UNSURE ☐</td>
</tr>
</tbody>
</table>

Date: ___________ From: ___________ LHC/DHF/District Hospital/GP/SPECIALIST

Dear Colleague at LHC/ANC/Emergency Dept at __________ LHC/Hospital

Please see for further management/delivery and your input as necessary. Please feel free to contact the clinic/office for further information and we will be willing to continue shared-care if this is necessary.

(Tick all that apply below)

She has a copy of her health records with additional information: Y ☐ N ☐

<table>
<thead>
<tr>
<th>MEDICAL</th>
<th>PAST OBSTETRIC</th>
<th>PRESENT OBSTETRIC</th>
<th>Psycho-social problems/OTHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ ↑BP/PREECLAMPSIA</td>
<td>☐ Recurrent Miscarriages</td>
<td>☐ Maternal age</td>
<td>__________________________</td>
</tr>
<tr>
<td>BP: ______ mmHg</td>
<td>☐ Previous cerclage</td>
<td>☐ Grand multipara</td>
<td>__________________________</td>
</tr>
<tr>
<td>PROTEINURIA:</td>
<td>☐ Pre-term birth</td>
<td>☐ Multiple pregnancy</td>
<td>__________________________</td>
</tr>
<tr>
<td>☐ DM pre-pregnancy</td>
<td>☐ Pre-eclampsia</td>
<td>☐ Other pelvic mass</td>
<td>__________________________</td>
</tr>
<tr>
<td>☐ Hyperglycaemia in pregnancy</td>
<td>☐ Gestational Diabetes</td>
<td>☐ Rhesus Negative</td>
<td>__________________________</td>
</tr>
<tr>
<td>OGGT(WHO criteria)</td>
<td>☐ Previous C-section</td>
<td>☐ Malpresentation&gt;36 weeks</td>
<td>__________________________</td>
</tr>
<tr>
<td>FBS _____ (&gt;92 mg/dl)</td>
<td>☐ Difficult anaesthesia</td>
<td>☐ Possible SROM</td>
<td>__________________________</td>
</tr>
<tr>
<td>1hr ______ (&gt;180 mg/dl)</td>
<td>☐ Uterine scar/surgery</td>
<td>☐ Possible ZIKV</td>
<td>__________________________</td>
</tr>
<tr>
<td>2hr ______ (&gt;153 mg/dl)</td>
<td>☐ PPH</td>
<td>☐ TORCH etc</td>
<td>__________________________</td>
</tr>
<tr>
<td>☐ Anaemia:</td>
<td>☐ Psychiatric</td>
<td>☐ OTHER__________</td>
<td>__________________________</td>
</tr>
<tr>
<td>☐ Haemoglobinopathy</td>
<td>☐ Stillbirth</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td>Specify:</td>
<td>☐ Perinatal/Neonatal death</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Severe Jaundice</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Haemolytic disease</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Blood Gp/Rhesus Incomp.</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Group B strep</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Fetal anomaly</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>☐ Chromosomal</td>
<td></td>
<td>__________________________</td>
</tr>
<tr>
<td></td>
<td>OTHER___________</td>
<td></td>
<td>__________________________</td>
</tr>
</tbody>
</table>

Utiline size for dates
| ☐ Larger: ______ cm | ☐ Smaller: ______ cm |
| ☐ Post-dates (>40 weeks gestation) | ☐ Abnormal USS findings | | RESULTS (if not attached) |

| ☐ Maternal age | ☐ Grand multipara | ☐ Multiple pregnancy |
| ☐ Other pelvic mass | ☐ Rhesus Negative | ☐ Malpresentation>36 weeks |
| ☐ Possible SROM | ☐ Possible ZIKV | ☐ TORCH etc |
| ☐ OTHER__________ | | __________________________ |

VACCINE STATUS

TETANUS ____

INFLUENZA____

<table>
<thead>
<tr>
<th>☐ Hb</th>
<th>☐ Group</th>
<th>☐ Rh</th>
<th>☐ SCT</th>
<th>☐ HB EP</th>
<th>☐ VDRL</th>
<th>☐ HIV</th>
<th>☐ Hep B</th>
<th>☐ Rubella</th>
<th>☐ Other</th>
<th>☐ HB EP</th>
</tr>
</thead>
</table>

DHV/Physician Signature ___________________________ Designation _____________

PRINT NAME/STAMP _______________________________
## Monthly Antenatal EMTCT Plus (Elimination of Mother to Child Transmission) Reporting Template for Syphilis

### General

<table>
<thead>
<tr>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1.</td>
<td>Number of women who attended antenatal clinic</td>
</tr>
<tr>
<td>G2.</td>
<td>Number of new patients in antenatal clinic</td>
</tr>
</tbody>
</table>

### Syphilis

<table>
<thead>
<tr>
<th>Count</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>S1.</td>
<td>Number of new patients receiving <strong>first test</strong> for Syphilis</td>
</tr>
<tr>
<td>S2.</td>
<td>Number of follow-up patients receiving <strong>second test</strong> for Syphilis</td>
</tr>
<tr>
<td>S3.</td>
<td>Number who <strong>tested positive</strong> for Syphilis (VDRL and TPPA positive)</td>
</tr>
<tr>
<td>S4.</td>
<td>Number of pregnant women who were <strong>treated</strong> for Syphilis</td>
</tr>
<tr>
<td>S5.</td>
<td>Number of <strong>congenital</strong> Syphilis cases (live births and stillbirths)</td>
</tr>
</tbody>
</table>

(a live birth or fetal death at >20 weeks of gestation or >500 g, including stillbirth, born to a woman with positive syphilis serology and without adequate syphilis treatment*)

* Adequate maternal treatment is defined as at least one injection of 2.4 million units of intramuscular benzathine benzylpenicillin at least 30 days prior to delivery.

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Ministry of Health  
Directorate of Women’s Health  
627-0010 Ext. 1562/1564  
dana.gibson@health.gov.tt or haroun.choate@health.gov.tt

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