Syphilis Management Tool**

WHO TO TEST

Clinical indications:

- Consistent symptoms. e.g. genital, anal or oral ulcers (usually painless) or generalized maculopapular rash (typically including palms and soles)
- Sexual contacts
- Pregnant people – at least three times during pregnancy
  - > First trimester, 28-32 weeks and at delivery
  - > More frequent testing if ongoing risk.
  - > Monthly testing if new infection/treatment.
- People with new, multiple, or anonymous sexual partners (every 3 to 6 months)
- Anyone requesting testing
- Anyone with any new confirmed or suspected STI

Offer STBBI testing to all clients/ patients as part of routine care.

If you test for one, consider testing for all STBBIs

HOW TO TEST

Cadham Provincial Laboratory (CPL) requisition:

Always include:
Reason for testing (e.g. symptoms or treatment monitoring)

Collect:
Serology: 5-10 mL blood in a red-stoppered tube or a serum separator tube (red top with yellow cap). Draw sample prior to or on same day as treatment.

On CPL requisition:

- STBBI Panel (syphilis, HBsAg, HCV Ab and HIV 1/2 Ag/Ab Combo) or;
- Prenatal Panel (syphilis, HBsAg, and HIV 1/2 Ag/Ab Combo) – doesn't include HCV Ab or;
- Syphilis Screen

Swabs: use a flocked swab in universal transport medium for ulcers, sores, moist skin lesions or newborn nasal discharge. Keep refrigerated until sent to CPL.

- On CPL requisition, indicate site and test requested - "syphilis PCR" or "lesion panel".

Cerebral spinal fluid (CSF): ≥1 mL CSF in a sterile container. Keep refrigerated until sent to CPL.

- On CPL requisition, indicate site and test requested - "VDRL" and, if indicated "syphilis PCR".

If you are sending a swab for syphilis PCR or CSF for VDRL, also request blood for syphilis serology.

HOW TO INTERPRET SEROLOGY RESULTS

Treponemal Test Results – With No Previous History of Positive Syphilis Serology in MB (If patient previously tested positive, refer to "How to assess for reinfection" on page 2)

Treponemal Test (CMIA) Result

- **Negative** → No current or previous syphilis infection OR Very early syphilis infection
- **Positive** → **Lab completes a Non-Treponemal Test (NTT, i.e. RPR or VDRL) and 2nd confirmatory treponemal test (TP-PA).**

RPR and TP-PA results
RPR+ (weakly reactive or ≥ 1 dil); RPR- (non-reactive)

	RPR+ TP-PA reactive	RPR- TP-PA reactive	RPR+ TP-PA non-reactive	RPR- TP-PA non-reactive
Most likely diagnosis	Active Infection	Old infection or active infection	Biological false positive or early active infection	False positive or early active infection
Actions	Complete staging, treatment (if not previously administered) and follow up.		Review history (immigration history, previous treatment, symptoms, and exposures) and assess clinically. Repeat test in 1 to 3 weeks if high index of suspicion/symptoms. If indicated, stage and treat empirically.	

- **Treponemal Tests:**
  - > **CMIA** = *Treponema pallidum* Ab IgG + IgM
  - > **TP-PA** = *Treponema pallidum* Ab; Aggl
  - > **FTA-ABS** (CSF test) = *Treponema pallidum* Ab; CSF; ImF
- **Non-Treponemal Tests (reported as non-reactive or reactive and a titre):**
  - > **RPR** = Reagin Ab (Syphilis); RPR
  - > **VDRL** = Reagin Ab (Syphilis); VDRL
- **For Public Health**: Negative results will not appear in PHIMS, but can be found in eChart Manitoba. If RPR result is non-reactive but CMIA is positive, only a "final syphilis interpretation" will be reported.

****Refer to Manitoba Health syphilis protocol for more details.**

Manitoba Health Syphilis Protocol: www.gov.mb.ca/health/publichealth/cdc/protocol/syphilis.pdf
Provider Report Form for STBBI and STI treatment (MHSU 6781) including contacts: www.gov.mb.ca/health/publichealth/surveillance/docs/mhsu_6781.pdf
Manitoba Health STI Medication Order Form: www.gov.mb.ca/health/publichealth/cdc/protocol/form11.pdf

Manitoba

HOW TO DETERMINE STAGING, TREATMENT AND CONTACTS

	Stage	Clinical presentation (may include):	Preferred treatment and follow-up testing	Adequate Serologic Response[*]	Trace back period for contacts
Infectious	Primary	Genital, anal or oral ulcerative lesions (usually painless), regional lymphadenopathy. The initial ulcer typically heals spontaneously after a few weeks.	Penicillin G Benzathine, 2.4 million units (MU) IM X 1 (in pregnancy[¥] give weekly X 2) Test 3, 6, 12 months after treatment	6 months: 4-fold drop 12 months: 8-fold drop 24 months: 16-fold drop	3 months
	Secondary	Generalized maculopapular nonpruritic rash (typically on palms and soles), condyloma lata, other rash types, fever, generalized lymphadenopathy, alopecia	Penicillin G Benzathine, 2.4 MU IM X 1 (in pregnancy[¥] give weekly X 2) Test 3, 6, 12 months after treatment	6 months: 8-fold drop 12 months: 16-fold drop	6 months
	Early latent (< 1 year since infection or last negative test)	Asymptomatic, only detected with serologic screening. Distinction of early vs. late latent is based on history of testing, symptoms, and exposure.	Penicillin G Benzathine, 2.4 MU IM X 1[#] (in pregnancy[¥] give weekly X 2) Test 3, 6, 12 months after treatment	12 months: 4-fold drop	1 year
Non – Infectious	Late latent (> 1 year since infection)	Asymptomatic, only detected with serologic screening. No history of adequate treatment and last exposure/ negative serology greater than 12 months ago. Sexual transmission unlikely. Non-infectious, however can be transmitted transplacentally or by direct blood transfer.	Penicillin G Benzathine, 2.4 MU IM weekly X 3 Test 12, 24 months after treatment	Data not clear	Assess long-term sexual partners/ contacts and children as appropriate
	Tertiary	Slow, progressive, inflammatory disease (neuro, cardiovascular or gummatous syphilis), often develops 10 to 30 years after untreated infection.	IV antibiotics usually (consult ID) Test 12, 24 months after treatment (without CNS involvement)	Data not clear	Assess long-term sexual partners/ contacts and children as appropriate

[¥] In pregnancy, if there is a delay of greater than nine days between doses, the series of injections should be restarted.

[*] Failure of NTT titres to decrease as described may indicate treatment failure or reinfection.

[#] For exposures to a sexual partner(s) with unknown syphilis status within the previous 12 months, stage as early latent for contact tracing but treat as per late latent (X 3 weekly doses) regardless of pregnancy status.

For all stages:

- **Neurosyphilis** can occur during ANY stage of infection. Asymptomatic OR symptomatic (headache, visual change, hearing loss, etc.). Only clue may be a persistent elevation of NTT titres in serum despite appropriate treatment. Laboratory confirmation with a positive VDRL or syphilis PCR in CSF. Consult ID if neurosyphilis suspected.
- Test and empirically treat all partners of infectious syphilis.
- **Complete and submit Provider Report Form (MHSU 6781) including contacts.**
- Advise no sexual contact for 7 days after treatment is administered, until any open lesions have dried, and until partner(s) tested and treated.
- If treatment failure or reinfection is suspected, review sexual history, reassess for new or persistent signs and symptoms including CNS, consider a CSF examination, and reassess for HIV infection. If HIV testing and CSF examination is negative, treat for latent syphilis (2.4 MU IM weekly X 3) and monitor NTT.

HOW TO ASSESS FOR REINFECTION

Patient with a positive syphilis serology who has previously tested positive

- Review details about previous positive serology including treatment and treatment response
- Review sexual health and immigration history

Consistent new signs and/or symptoms?

- **Yes** → Likely a new infection / re infection, especially if the RPR titre are at least 4 fold higher than the last test result, e.g. 1:2 → 1:8 → Complete staging, treatment and follow up
- **No** → **4-fold rise or higher in the RPR? E.g. 1:2 → 1:8**
  - **Yes** → New infection / re-infection → Complete staging, treatment and follow up
  - **No** → **Exposure(s) to infectious syphilis case(s) after their last treatment, but asymptomatic and no change or less than 4 fold rise in the RPR?**
    - **Yes** → **Repeat testing in 1-2 weeks and reassess**
Consider empiric treatment
    - **No** → **Likely an old infection not requiring treatment**
Monitor and repeat testing as clinically indicated

- NTT may revert to non-reactive after treatment or remain at a low steady level (e.g., ≤1:4 dilutions).
- Repeat testing is not required if baseline or follow-up NTT becomes non-reactive, but may be considered in HIV-infected individuals or recent exposures to syphilis or new or persistent signs/symptoms.
- A rising NTT (4 fold or higher) after treatment may indicate treatment failure or reinfection.