Treatment for Uncomplicated Gonorrhea, Chlamydia, and Syphilis by Public Health Nurses

Provincial Population & Public Health Guideline

Clinical Communicable Disease Control, Population and Public Health

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1. Abbreviations

CRNM	College of Registered Nurses of Manitoba
DOT	Directly Observed Treatment
DPIN	Drug Program Information Network
PHIMS	Public Health Information Management System
PHN	Public Health Nurse
RN	Registered Nurse
STBBI	Sexually Transmitted and Blood Borne Infections
STI	Sexually transmitted infections

2. Purpose

This guideline serves as a Clinical Decision Tool to promote safe and consistent care and articulate the scope of practice and care guidance for public health nurses (PHN) administering medications for the treatment of uncomplicated gonorrhea, chlamydia, and syphilis, as authorized under Reserved Act 9 of the *College of Registered Nurses of Manitoba General Regulation*[1]. This guidance is consistent with the provincial communicable disease protocols for chlamydia, gonorrhea, and syphilis[2-4].

3. Scope

This guideline applies to PHNs (including Communicable Disease Coordinators if involved in direct care) who administer treatment for uncomplicated gonorrhea, chlamydia, and syphilis in the course of their work, as authorized by regulations that govern registered nurse scope of practice[1,6,7]. PHN scope of practice is further determined by the direct employer and the RN's individual scope of practice. Regional employers may determine a narrower scope of practice for PHNs delivering STI treatment authorized under the CRNM General Regulation[1], Reserved Act 9, but cannot determine an STI treatment scope of practice beyond what is described in this document.

4. Background

Changes to the College of Registered Nurses of Manitoba General Regulation[1], Reserved Act 9 were made in 2024 to extend access to STBBI care by regulated nurses across Manitoba. The additional language includes:

A registered nurse may administer a drug by any method for the treatment of uncomplicated gonorrhoeae, chlamydia and syphilis if the registered nurse

> (a) provides communicable disease nursing care in a hospital or health care facility operated by a health authority, the government, the government of Canada or a First Nation or in another practice setting as part of a communicable disease response program funded by a health authority, the government, the government of Canada or a First Nation;
>
> (b) uses a clinical decision tool in place in the practice setting referred to in clause (a); and
>
> (c) administers the drug in accordance with a protocol for controlling communicable disease approved by the chief public health officer appointed under The Public Health Act.

Treatment of STIs by PHNs is one aspect of a population and health equity-oriented response to STBBI outbreaks in Manitoba. Public Health Nurses are not intended to replace the role of primary care providers, but to enhance the capacity of the health system reach high priority populations that public health is uniquely positioned to engage with (e.g. known cases who have not received treatment, contacts, and priority populations such as incarcerated individuals).

There are additional core competencies and approaches that are not described in this document but are important elements of Sexually Transmitted and Blood Borne Infections (STBBI) care, and should be considered in regional orientation for PHNs or PHN professional development. Appendix A provides a list of some of these approaches and potential sources for staff preparation.

5. Scope and Standards of Practice

5.1. Provincial Practice Supports

Provincial Population and Public Health defines the practice scope and standards for PHN treatment of STIs, and develops guidance materials to support the practice. A course entitled "STBBI Testing and Treatment for Chlamydia, Gonorrhea and Syphilis course for RNs/RPNs/LPNs" is available through the Shared Health Learning Management System.

5.2. Regional Practice Supports and PHN Competencies

Each region, program, or team where PHNs are administering STI treatment as authorized by the CRNM General Regulation[1] must:

- Have a program or team document that completes the regional or team specific guidance not included in this document. This may include; regional, program or team documentation requirements, forms or tools (outside of the Public Health Information Management System [PHIMS]), specific referral and consultation pathways, specific scope of practice if it differs from the scope described in this document.
- Provide region or site-specific orientation and practice support for the PHN who will be providing treatment (this may include self-study).
    - For syphilis treatment, the PHN should be provided the opportunity to observe at least one treatment, and be observed by an authorized PHN or Communicable Disease (CD) Coordinator for at least one treatment, prior to independent practice.
    - It is recommended that autonomous treatment for syphilis only be provided by PHNs who have been oriented to syphilis case and contact management.
    - Methods to monitor ongoing quality of care and support practice competence.
    - PHN must be familiar with and practice according to the provincial protocols for chlamydia, gonorrhea, and syphilis, and this Provincial PPH Guideline.
    - Additional educational materials are published on the provincial webpage Sexually Transmitted Infections and Blood-Borne Pathogens | Health | Province of Manitoba (gov.mb.ca)

5.3. Clients Eligible to Receive STI Treatment by PHN

Priority for PHN treatment focuses on highest public health impact, specifically for individuals who experience barriers to care where onward transmission is a concern, and/or clients/priority populations who were tested by public health as part of an outreach STBBI strategy or outbreak response.

Clients treated for STIs by PHNs must be:

- **A minimum of 12 years of age.**
    - *Client must be 40 kg (88 lbs.) or greater in weight to be treated by a PHN with Penicillin G benzathine 2.4 million units IM as a single dose. Clients under 40 kg require weight-based dosing and must be referred to an

appropriate provider (e.g. Pediatric or Adolescent Medicine or Infectious Disease Specialist).

- **Client is able provide informed consent:** understands the information, benefits and risks that are relevant to deciding to be treated. If there are any doubts about the individual's capacity to consent, the treatment should not be provided by the PHN, and the client should be referred to a physician/nurse practitioner for medical assessment.
    - For clients aged 12-15, a reasonable attempt must be made by the nurse to assess the client's ability to make health decisions, assess for child in need of protection related to sexuality, and encourage the client to involve their legal guardian to support them to act on their health decisions. The PHN understands and abides by all relevant legislation guiding practice[1].

5.4. Scope of Practice for Administering Treatment for Uncomplicated STIs

PHNs are able to administer treatment for STIs as described in this guideline, but do not have delegative authority to author orders or prescribe STBBI treatment for administration by another provider.

PHNs may administer treatment for uncomplicated gonorrhea, chlamydia and syphilis according to the following conditions and definitions:

Condition	Definition (in scope)	Excludes (out of scope)
Uncomplicated Chlamydia Cases and Contacts	Includes lab-confirmed, clinical cases, and contacts as defined in Provincial Protocol, genital/urine, rectal, or pharyngeal specimens in the absence of symptoms of complicated infection	Excludes clients with symptoms suggestive of pelvic inflammatory disease, epididymitis, or other syndromes requiring additional examination or treatment. Excludes infections of the eye, and LGV infection. Excludes clients with contraindications (e.g. allergies or conditions) to in-scope treatments.
Uncomplicated Gonorrhea Cases and Contacts	Includes lab-confirmed, clinical cases, and contacts as defined in Provincial Protocol, genital/urine, rectal, or pharyngeal specimens in the absence of symptoms of complicated infection. Note recommended first-line treatment for non-genital presentation	Excludes infections of the eye. Excludes clients with symptoms suggestive of pelvic inflammatory disease, epididymitis, arthritis, endocarditis, meningitis, or other disseminated gonococcal infection syndromes requiring additional examination or treatment. Excludes clients with contraindications (e.g. allergies or conditions) to in-scope treatments.

[1] (e.g. *Personal Health Information Act*, *Mental Health Act*, *Child and Family Services Act*, *Vulnerable Persons Living with a Mental Disabilities Act*)

Infectious syphilis Confirmed or Suspect Cases and Contacts	Primary, secondary, or early latent syphilis, and others defined in Section 8.2 of the Provincial Protocol (Who to Treat for Syphilis Without Test Results – including contacts to infectious syphilis OR any person presenting with symptoms or primary or secondary syphilis) See Special Considerations for treatment of pregnant people, people living with HIV, people with symptoms suggestive of neurological involvement.	Excludes congenital syphilis, neurosyphilis, tertiary syphilis, treatment of other treponemal infections (yaws, pinta, bejel). See Special Considerations for treatment of late latent syphilis. Excludes clients with contraindications (e.g. allergies or conditions) to in-scope treatments.
Syphilis Treatment by PHN Special Considerations	**Early Latent Syphilis (including those with exposures to a sexual partner(s) with unknown syphilis status within the previous 12 months) and Late Latent Syphilis:** Clients who lack access to care (consultation with the Communicable Disease Coordinator and/or Medical Officer of Health recommended) AND clients who were tested by the PHN may receive treatment by the PHN according to Provincial Protocol. In addition to a neurosymptomology history, PHNs must provide a brief neurological examination. **Pregnant Clients Requiring Treatment for Syphilis:** May be treated by PHN if barriers to care. See special consideration for risk of Jarisch-Herxheimer reaction. Penicillin G benzathine is the only recommended treatment for syphilis in pregnancy. If over 20 weeks gestation, fetal ultrasound highly recommended. CD Coordinator/Medical Officer of Health (MOH) consultation prior to treatment recommended. Universal consultation with pediatric Infectious Diseases is necessary for all confirmed cases of syphilis during pregnancy to ensure prompt assessment for congenital syphilis. **Clients Living with HIV requiring syphilis treatment:** Should be referred to an HIV care provider for syphilis assessment and treatment. PHN may provide treatment per protocol in consultation/communication with the HIV care provider **Client with symptoms suggestive of neurological syphilis:** Require referral to Infectious Disease Specialist. Complete a brief neurological assessment and document reported and observed findings to support the ID referral. In order to facilitate timely treatment to render the client non-infectious, the PHN may consider providing interim syphilis treatment with benzathine penicillin G. This should be provided in communication with the Infectious Disease Specialist and CD Coordinator/MOH.	

6. Standards of Care

6.1. Focused Sexual Health History and Physical Exam

All PHNs providing treatment must obtain a focused sexual health history including relevant symptoms assessment, allergy assessment, pregnancy assessment, a focused STBBI history (including STBBI testing history for HIV, gonorrhea, chlamydia, syphilis

serology, and treatment history for syphilis, treatment for gonorrhea or chlamydia in the last 12 months).

Review for symptoms specific to the infection being treated, and assess for symptoms of complicated infection that would require referral to another provider (e.g. pelvic inflammatory disease [PID], epididymitis). Men with epididymitis may present with unilateral swollen epididymis or testicle or both, dysuria, fever and occasionally shaking chills. * PID should be suspected in women presenting with lower abdominal tenderness, uterine/adnexal tenderness, or cervical motion tenderness.

6.2. Additional History for Syphilis

Clients receiving treatment for syphilis by a PHN must have a history taken for symptoms specific to syphilis including: chancre/sores, lymphadenopathy [regional / generalized], skin lesions, alopecia, rash or scarring. Document, describe and provide dates.

- If syphilis specific symptoms are reported or observed, a physical examination specific to those symptoms will be offered, to the degree possible for the setting of care. Clients reporting genital/anal sores or lesions should be encouraged/supported to see a provider (e.g. primary care provider) who can adequately examine for differential diagnosis. This assessment may follow antibiotic treatment by the PHN. (See Appendix B: Common Findings with Neurosyphilis and Assessment Guide).

If treating for syphilis, a brief review of neurological symptoms including: Review for last 12 months history of neurological symptoms with all clients: Vertigo, ocular/visual changes such as diplopia, auditory changes, personality or memory changes, unexplained headaches, stroke-like symptoms, or other. Document, describe, and provide dates. History must be completed if not already completed by another health care provider (See Appendix B: Common Findings with Neurosyphilis and Assessment Guide)

- If unusual neurological symptoms are reported or readily apparent/observed the PHN should perform a brief focused neurological exam specific to those symptoms and a referral to Infectious Diseases is necessary.
    - The PHN is responsible for drafting a summary of the client's sexual health history (relevant to the referral), serological history, and a summary of the findings from the neurological assessment. This will be forwarded to the CD Coordinator, who will review and forward to the appropriate MOH for review and assistance with referral to Infectious Diseases as indicated.

- **Clients with latent syphilis (with exposures to a sexual partner(s) with unknown syphilis status within the previous 12 months) or late latent syphilis:** In addition to a neurological symptom history, clients with latent syphilis should receive a brief neurological examination as described above and in Appendix B and Assessment Tool for Syphilis Treatment by PHN.

6.3. Pregnancy Assessment

For all potentially pregnant clients review possibility of pregnancy. Also inquire if an ongoing sexual partner is pregnant. Offer urine hCG if suspected. If gestation known document. Assess approximate gestation (last normal menstrual period, signs of fetal movement, visible signs of pregnancy).

It is always preferred that the PHN connect pregnant clients to a prenatal care provider (unless termination of the pregnancy is planned), in order to facilitate ongoing prenatal care. However, in the circumstance that the client is reluctant/ unable to connect to care, the PHN may provide treatment for gonorrhea, chlamydia, and/or syphilis, in order to avoid delays in treatment and subsequent negative sequelae in the fetus.

6.3.1. Pregnant Clients Requiring Treatment for Syphilis

PHNs may treat with Penicillin G benzathine (Bicillin) 2.4 million units IM with a second dose in 7 days. If treating a pregnant person with suspect syphilis, serology should be drawn at the time of Bicillin treatment to inform if a second dose is required a week later (for confirmed cases). For pregnant people receiving a three-dose course of penicillin G benzathine treatment, delay in doses is not optimal, so if there is a delay of greater than nine days between doses, the series of injections should be restarted. Clients should be informed of the possibility of Jarisch-Herxheimer reaction. Instruct the client to seek medical attention if fever, decreased fetal movement, or regular contractions are experienced within 24 hours of treatment. (See Appendix C: Client Information Sheet). If over 20 weeks gestation, fetal ultrasound highly recommended. CD Coordinator/MOH consultation prior to treatment recommended. Universal consultation with pediatric Infectious Diseases is necessary for all confirmed cases of syphilis during pregnancy to ensure prompt assessment for congenital syphilis.

Universal consultation with pediatric Infectious Diseases is necessary for all confirmed cases of syphilis during pregnancy to ensure prompt assessment for congenital syphilis.

6.4. Allergy Assessment

Allergy assessment is essential for all clients. If an allergy is reported review history of allergic response, history of allergy testing or documentation, check Drug Program Information Network (DPIN) for history of relevant dispensed treatments. Consider referral for allergy testing, desensitization, or alternate treatment regime. Confirmed medication allergies should be documented in PHIMS as a Client Warning, accompanied by a note at the client level.

- Ensure that an anaphylaxis management kit is present when treating a person with an antibiotic. If treating the client with an **injectable antibiotic** (Penicillin G benzathine or ceftriaxone), advise the client to remain in the service space for 15 minutes post administration in the event of an adverse reaction. If care is provided in community (e.g. client home), the PHN will remain in the service space for 15 minutes post administration. If there is a specific concern regarding potential anaphylaxis, 30 minutes is a safer post administration interval.

6.5. Contact Interview on Speculation

For all cases and contacts receiving treatment with test results pending, interview the client for sexual contacts at the time of treatment (use interview period based on most likely staging) to avoid having to pursue the client for a contact interview on receipt of positive results.

6.6. Education and Informed Consent

Obtain informed consent ensuring client has appropriate information and capacity to provide consent. Clients who cannot provide informed consent cannot be treated by the PHN. Provide relevant education regarding STI treatment including;

- recommended period of abstinence/barrier protection following treatment (7 days – or longer if open sores are have not healed),
- what to do if oral treatment not tolerated (emesis with visible pills within 30 min)
- discuss the risks and benefits of treatment
    - For symptomatic people being treated for gonorrhea or chlamydia, the client should be aware that if the symptoms do not improve, they may have a different type of infection that requires follow up by another provider.
    - potential for Jarisch-Herxheimer reaction after syphilis treatment (see Appendix C). See considerations for pregnant people being treated for syphilis.
- the importance of regular STBBI screening (and serological follow up specific to syphilis).

- for clients eligible for HIV pre-exposure prophylaxis (PrEP), discuss and offer referral to PrEP provider.

6.7. Ensure/Offer Complete STBBI Testing

Clients should be offered complete STBBI (e.g. gonorrhea and chlamydia NAAT, and STBBI serology panel) if not already completed, according to regional clinical decision tools for STBBI testing. In addition, if treating the client for syphilis, it is generally necessary to draw serology for syphilis (even if recently completed) at the time of testing in order to inform diagnosis, staging, and monitor serological response to treatment. Refer to Cadham Provincial Laboratory Guide to Services[8].

6.8. Follow Up

Follow up with the client to share results and/or follow up to monitor response to treatment (or refer to primary care provider for same). Clients requiring ongoing serologic response monitoring (infectious syphilis cases) should be assisted to attain appropriate care for this follow up. Public health nurses are generally unable to sustain the ongoing care of clients post treatment unless there are specific public health implications (e.g. pregnancy).

Referrals to Infectious Diseases, Pediatric Infectious Diseases, Prenatal Care Providers, or HIV Care Providers should be documented in the PHIMS investigation (Add interventions, upload context documents where appropriate).

6.9. Documentation

STI treatments must be recorded in the PHIMS investigation according to the Medications QRC Medications-QRC (phimsmb.ca).

Publicly funded treatments for sexually transmitted infections (those detailed on the STI Medication Order Form), that are administered must be reported to the Manitoba Health Surveillance Unit using the PROVIDER REPORT FORM FOR SEXUALLY TRANSMITTED AND BLOOD-BORNE INFECTIONS (STBBI) AND STI TREATMENT (gov.mb.ca). This reporting process enables entry into PHIMS, and flow of the treatment information into Manitoba eChart.

PHNs who are able to document STI treatments directly into PHIMS STBBI investigations do not need to complete the Provider Report Form for STBBI. PHNs providing treatment to clients who do not have active PHIMS case or contact disease investigations may document the treatment and pre-emptive contact interview in a Provider Form Investigation while awaiting test results.

Documentation and storage of paper or other records will follow regional and program policies, standards and protocols.

7. STI Treatment Regimes in Scope for PHNs

STI medications are provincially funded and may be ordered to clinical sites using the STI Medication Order Form (gov.mb.ca)

Ensure that the medication lot has not expired. For IM ventrogluteal land marking resource, see Appendix D.

Oral one-time treatments should be provided by directly observed treatment (DOT) unless exceptional circumstances (e.g. client nauseated).

The following treatments for the indicated conditions are in scope for PHNs to administer. If an alternative treatment is not available or possible due to contraindications, the client must be referred to another treating provider.

Condition	In Scope Treatments listed in Provincial Communicable Disease Management Protocols[2-4]	General Contraindications*
Uncomplicated Chlamydia	1 gm azithromycin by mouth	Known hypersensitivity to azithromycin, erythromycin, any macrolide or ketolide drug. Contraindicated in patients with a history of cholestatic jaundice/hepatic dysfunction associated with prior use of azithromycin.
Uncomplicated Gonorrhea (genital, rectal, pharyngeal)	See recommended treatment based on site in Provincial Protocol 800 mg cefixime AND 1 gm azithromycin by mouth **OR** 250 mg ceftriaxone IM in a single dose AND 1 gm azithromycin by mouth	See azithromycin contraindications above. Cefixime contraindications: cephalosporin hypersensitivity, cephamycin hypersensitivity, or history of type 1 reactions to penicillin (i.e. immediate hypersensitivity with systemic manifestations of anaphylaxis) Ceftriaxone contraindications: cephalosporin hypersensitivity *Be aware of lidocaine contraindications (e.g. hypersensitivity to local anesthetics of the amide type) if lidocaine solution used as solvent with ceftriaxone for intramuscular injection*
Uncomplicated gonorrhea (genital, rectal, pharyngeal)	Azithromycin 2 gm by mouth in a single dose *Only considered as an alternate treatment if a history of severe allergy to cephalosporins. A test of cure is*	Known hypersensitivity to azithromycin, erythromycin, any macrolide or ketolide drug. Contraindicated in patients with a history of cholestatic jaundice/hepatic dysfunction associated with prior use of azithromycin.

	recommended when monotherapy with azithromycin is used. Risk of treatment failure when using azithromycin monotherapy. Significant gastrointestinal side effects associated.	
Syphilis (primary, secondary, early latent < 1 year)	Penicillin G benzathine 2.4 million units IM as a single dose [divided in 2 doses i.e. 1.2 million units each syringe], administered by deep intramuscular (IM) injection to each ventrogluteal site. Repeat one week later for pregnant people with confirmed syphilis infection **Pregnant persons who report an allergy to penicillin** should be referred to the Pregnancy Penicillin Allergy De-labelling Clinic (e.g. HSC Women's Prenatal Allergy Clinic, Fax: (204)787-2876 Penicillin G benzathine is the only recommended treatment for syphilis in pregnancy.	History of a previous hypersensitivity reaction to any of the penicillins is a contraindication to Penicillin G benzathine treatment. PHNs may refer clients for allergy testing to confirm.
	Second Line: Ceftriaxone 1 gm IM (ventrogluteal) for 10 days	Do not use ceftriaxone if known allergy to cephalosporins. *Be aware of lidocaine contraindications (e.g. hypersensitivity to local anesthetics of the amide type) if lidocaine solution used as solvent with ceftriaxone for intramuscular injection*
	Third Line: Doxycycline 100 mg, by mouth, twice daily for 14 days. *Doxycycline should not be offered as an alternative treatment if not medically indicated (e.g. if the client prefers a non-injectable treatment). Consult the CD Coordinator/MOH prior to doxycycline treatment for reasons other than confirmed severe penicillin allergy*	Doxycycline is contraindicated for those with allergies to tetracycline antibiotics (e.g. minocycline) or any ingredients in the capsules, and is **contraindicated in pregnancy and when breastfeeding/chestfeeding.**
Latent syphilis > 1 year (Late Latent) or unknown duration	Benzathine penicillin G 2.4 million units IM (ventrogluteal site) weekly for three doses.	History of a previous hypersensitivity reaction to any of the penicillins is a contraindication to Bicillin® treatment. PHNs may refer clients for allergy testing to confirm.
	Second Line: Ceftriaxone 1g IM (ventrogluteal) daily for 10 days	Do not use ceftriaxone if known allergy to cephalosporins. *Be aware of lidocaine contraindications (e.g. hypersensitivity to local anesthetics of the amide type) if lidocaine solution used as solvent with ceftriaxone for intramuscular injection*

	Third Line: Doxycycline 100 mg PO BID for 28 days *Doxycycline should not be offered as an alternative treatment if not medically indicated*	Doxycycline is contraindicated for those with allergies to tetracycline antibiotics (e.g. minocycline) or any ingredients in the capsules, and is **contraindicated in pregnancy and when breastfeeding/chestfeeding.**

**this list includes common allergy-related contraindications but is not considered exhaustive of all contraindications related to chronic and acute health conditions and possible drug interactions*

8. Validation and References

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Appendix A: Core Competencies and Approaches that Support STBBI Care

Orientation is determined by a PHN's RHA, program, and team. The following resources are intended to support practice but are not provincially required orientation.

Core Competencies for the Prevention of STBBIs: Core Competencies for STBBI Prevention Cases | Canadian Public Health Association (cpha.ca)

Equity-Oriented Care: Home Page - EQUIP Health Care | Research to Improve Health Equity

Cultural-Safety

Manitoba Indigenous Cultural Safety Training

Sex Positivity

- SERC Definition: Sex-Positivity - SERC
- Youtube video: What IS Sex Positivity? - YouTube (10 min)

Harm Reduction

- Shared Health LMS System Computer Training - Digital Health - Health Providers (sharedhealthmb.ca) Use search field for "harm reduction" (approx. 60 min)
- WRHA Position Statement on Harm Reduction Healthy Sexuality & Harm Reduction | Winnipeg Regional Health Authority (wrha.mb.ca)

Trauma and Violence Informed Care

- EQUIP Health Care Trauma- and Violence-Informed Care Foundations Curriculum - EQUIP Health Care | Research to Improve Health Equity
- Alberta Health Services Trauma-Informed Care (TIC) e-Learning Series Trauma Training Initiative | Alberta Health Services

Gender Equity and Gender Affirming Care

- Shared Health: 2SLGBTQQIA+ Community - Shared Health (sharedhealthmb.ca)
- Health Care Excellence Canada: Equity, Diversity and Inclusion Virtual Learning Exchange (healthcareexcellence.ca)

STBBI Testing and Treatment for Chlamydia, Gonorrhea and Syphilis course for RNs/RPNs/LPNs. This course will run every 6-8 weeks register through https://sharedhealthmb.learnflex.net/include/login.asp?url=/users/index.asp

If you are unable to access the LMS, please contact PPHTraining@sharedhealthmb.ca for more information or to register for the course (include in the subject line STBBI Training).

Appendix B: Common Findings with Neurosyphilis and Assessment Guide

Neurosyphilis due to *T pallidum* can occur at any time after the initial infection. The clinical manifestations may vary widely. The diagnosis of neurosyphilis is often initially suspected based on clinical findings coupled with positive serologic tests and is confirmed through lumbar puncture (LP).

Stage	Clinical Presentation	Signs and Symptoms	Common Onset
Early	Asymptomatic	None	Primary or Secondary syphilis
	Meningeal symptoms	Can affect cranial nerves especially VI, VII and VIII: VI (abducens) Oculomotor and trochlear – blurring or diplopia VII (facial) hemifacial weakness VIII (vestibulocochlear, acoustic, auditory) hearing loss, tinnitus, and balance, vertigo	Typically within one year. More common with concurrent HIV infection
	Ocular	Ocular involvement (Cranial nerves II through VII) Uveitis or panuveitis manifestations • Eye redness • Eye pain • Light sensitivity • Blurred vision • Dark, floating spots in your field of vision (floaters) • Decreased vision	
Early/ Late	Meningovascular symptoms	Headaches, dizziness, personality changes, memory loss, stroke-like symptoms: hemiparesis, hemiplegia, gait instability, seizures, and aphasia	1-7 years, (pre-antibiotic era)
Late	General paresis	Changes in the affect, sensorium, and personality, irritability, memory loss hyperactive reflexes, slurred speech, pupillary disturbances, and optic atrophy, hypotonia, dementia tremors	10-25 years
	Tabes dorsalis	Hyperactive reflexes, slurred speech, pupillary disturbances, and optic atrophy tremors, lancinating pain to the lower extremities, ataxia, pupillary disturbances, bowel or urinary incontinence, a positive Romberg sign, peripheral neuropathy, and cranial nerve involvement	20 years
Atypical		Term used to describe neurosyphilis that does not fulfill the clinical criteria for one of the "classic" forms e.g. encephalitis	

*See References and Validation for Sources[9-19]

ASSESSMENT GUIDE

Syphilis Symptom Review: Review history of syphilis symptoms with all clients including: Asymptomatic, Chancre/sores, Lymphadenopathy [regional / generalized], Skin lesions, Alopecia, Rash or scarring. Document: Describe and provide dates. Provide physical assessment of reported symptoms if possible.

Neurological Symptom History: Review for last 12 months history of neurological symptoms with all clients: Vertigo, Ocular/visual changes, Auditory changes, Personality or memory changes, Unexplained meningitis-like headaches, Stroke-like symptoms, or Other. Document, describe and provide dates. Provide focused neurological exam if symptoms present and refer for care with specialist.

For all clients with **Latent Syphilis (with exposures to a sexual partner(s) with unknown syphilis status within the previous 12 months) and Late Latent Syphilis:** provide focused/brief neurological exam in addition to neurological symptom review.

Brief Neurological Assessment: Assessment should be focused around the specific symptoms if reported or observed.

Visual and Auditory: pupillary changes (Pupil size and alignment, equal and reactive to light, constriction and convergence, Argyll-Robertson* Uveitis pain, redness, light sensitivity, decreased visual acuity; diplopia (double vision); floaters; pan uveitis (inflammation of all layers of eye) hearing loss, tinnitus; hearing and balance; vertigo

- **Argyll-Robertson pupils:** bilateral small pupils that reduce in size on a near object (i.e., they accommodate and converge normally), but do not constrict when exposed to bright light (i.e., they do not react to light).

Facial assessment: Facial/hemi-facial weakness: raise eyebrows, puff out cheeks, purse lips, bear teeth; tongue protrusion, Visualize soft palate and uvula for symmetry in movement. Speech: Aphasia, slurred speech). Light touch sensation (test with cotton ball to each cheek), loss sense of smell

Meningovascular symptoms: meningeal headaches (severe and unexplained, and accompanied by neck stiffness), dizziness, stroke-like symptoms, memory loss, forgetfulness, dementia, personality changes, psychosis

Large muscles and balance: Hemiparesis; unilateral weakness of upper or lower limbs; Ataxia; gait (one foot in front of next, tip toe, walk on heels) abnormality; seizures, tremors, involuntary movements, abnormal reflexes. Bilateral strength of head/neck, shoulders/arms, lower limbs (hip flexion, knee flexion/extension, ankle plantar/dorsiflexion). General paresis, limb hypotonia. Coordination: Heel to shin test, Romberg's test*

Romberg's test: Stand with heels together, close eyes, asses proprioception – positive Romberg is loss of balance with eyes closed but can keep balance with eyes open.

Manitoba
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Appendix C: Client Information Sheet

Being Treated with Benzathine Penicillin G Long-Acting (Bicillin L-A®) for Syphilis

This medicine is given by injection into the hip muscle. Since it is a large amount of medication it is divided into two shots (one to each hip).

The injections are painful, try to relax your muscles and take deep breaths. If, during the injection, you feel pain shooting down your leg to your knee or foot, let your provider know right away.

Is there anyone that can't take penicillin?

Talk to your nurse or doctor before you get penicillin if you've had a reaction to penicillin, amoxicillin, or a cephalosporin medicine (Keflex®, Ceclor®). Depending on the type of reaction you had, your healthcare provider will help you decide if you can have this treatment.

What are the side effects of the medicine?

Penicillin may cause an upset stomach, nausea, and vomiting. You may also have pain and tenderness where you get the injection.

Allergies to penicillin are very rare, but can be serious. We ask that you stay in the clinical area for 15 minutes after treatment in case of a reaction.

After you're treated for syphilis, you can have a reaction called a **Jarisch-Herxheimer** reaction. Symptoms may include: • chills and/or fever (temperature over 38.5 °C) • sweating • headache • a faster heart rate than normal • muscle and joint pain • feeling tired • a rash

This reaction can happen 4 to 6 hours after the injection. It usually goes away by 24 hours. You can take pain medicine like ibuprofen (e.g., Motrin®, Advil®) or acetaminophen (e.g., Tylenol®). Follow the directions on the package or ask your nurse, doctor, or pharmacist.

Jarisch-Herxheimer reaction can cause distress to a fetus, so it is important to know if you are pregnant and how far along before treatment.

Go to an emergency department or call 9-1-1 if you have:

- trouble breathing or swallowing
- swelling or tingling in the mouth or on the face
- hives • wheezing

What follow-up do I need?

The number of Bicillin injections you get depends on what stage of syphilis you have. Your nurse or doctor will talk to you about this.

You will need follow up blood tests for syphilis on:

Month 1 Date: _____

Month 3 Date: _____

Your blood test will stay positive for life, even if you've been treated. You can be re-infected with syphilis if you're exposed again, which can only be detected with regular blood tests. **Getting tested every 3 to 6 months is recommended to ensure that your treatment was successful and to look for reinfections.**

Contraception and Sex after Bicillin

Sex After Treatment: It's important not to have unprotected sex (oral, vaginal, or anal sex without a condom or barrier) until you and your partner(s) are tested and for 7 days after you and your partner(s) are treated. The best protection is not to have sex (oral, vaginal, or anal) for 7 days after you and your partner(s) are treated. You can get re-infected if your sexual partner(s) hasn't been treated. If you have syphilis sores, you should avoid sex or use condoms/barriers until the sores are completely healed.

The birth control pill, patch, and ring might not work as well when you take penicillin. Keep using your regular method of birth control and use condoms for 7 days after you get the injection to help prevent pregnancy.

Appendix D: Ventrogluteal Landmarking

The ventrogluteal site is a safe injection site for adults and children receiving irritating or viscous solutions and is the site of choice for administering IM injections to adults. In addition, this site provides the greatest thickness of gluteal muscle, is free of penetrating nerves and blood vessels, and has a narrower layer of fat. The dorsogluteal site is not recommended because of proximity to the sciatic nerve. The ventrogluteal site is easiest to landmark when a person is lying on their side with the upper knee slightly bent, although the site is accessible from a number of positions (supine, standing, prone). If there is any question on the accuracy of land marking on a client, consider having the client position themselves side lying.

- The greater trochanter of the femur can be palpated as a solid structure at the supero-lateral portion of the femur, lying a hand's breadth below the tubercle of iliac crest and forming a wide prominence just in front of the hollow of the side of the hip.
- Place the palm of your hand over the greater trochanter. For the left hip, you should landmark with your right hand and vice versa
- The iliac crest can be palpated as a broad convex bony ridge lying below the waist and forming the upper end of the ilium, anteriorly ending as the ASIS. The index finger is placed on the ASIS and the middle finger is extended palpating the iliac crest towards the iliac tubercle, at the widest portion of the iliac crest and located approximately 5 cm posterior to the ASIS.
- The middle finger and index finger should be separated as widely as possible and skin stretched in between. If performed correctly, the target of this technique, the gluteus medius, will sit between the index and middle fingers.
- The needle should then be inserted at an angle of 90° to the skin in the middle of the triangle formed between the middle and index fingers and the imaginary line joining the finger-tips.

Also see:

Elsevier Nursing Skills Online (desktop app): Intramuscular Injection
18.6 Administering Intramuscular Medications – Nursing Skills (pressbooks.pub)
Elsevier – Clinical Skills │ Medication Administration: Intramuscular Injections
BC Campus Pressbooks, BC Institute of Technology. (n.d.) Clinical Procedures
https://pressbooks.bccampus.ca/clinicalproceduresforsaferpatientcaretrubscn/chapter/7-5-intramuscular-injections/