Yukon Treatment Guidelines for Sexually Transmitted Infections (STI) in Adolescents and Adults 2015

The Yukon Treatment Guidelines for Sexually Transmitted Infections (STI) in Adolescents and Adults 2015 has been adapted from the Canadian Guidelines on Sexually Transmitted Infections for territorial use with permission from the Public Health Agency of Canada. Please refer to these guidelines for further discussion beyond this document. Variations seen within this document are based on local STI epidemiology. The Canadian Guidelines are available on line at: **www.phac-aspc.gc.ca**. An online version and updates of Yukon Treatment Guidelines is available at www.hss.gov.yk.ca/health_professionals_guidelines.php

Recommendations regarding treatment of pediatric infection are excluded from these guidelines. In general, children diagnosed with a STI should be managed in conjunction with a specialist at a referral centre and be reported to Yukon Family and Children's Services in Whitehorse or Regional Services in Yukon communities for investigation of possible sexual abuse (see section on back page on Considerations in Persons under 19 Years of Age).

- STI are reportable under the Yukon Public Health and Safety Act (for copies of Notification of Sexually Transmitted Infections forms, see STI Resources on back page).
- Partner notification is a critical component of STI control and important in preventing further spread and re-infection. Assistance with partner notification (PN) is available from YCDC (see section on Partner Notification on back page).

General Considerations for STI

- Due to the rates of STI in Yukon, it is appropriate to assess for risk of and screen for STI at routine medical appointments. This is particularly important in individuals at higher risk for STI* or in individuals where the risk of consequences of STI are high (e.g. adolescents, pregnant women).
- Drugs for treatment of reportable STI are provided free of charge at Yukon Communicable Disease Control (YCDC) and Community Health Centres (when the client presents at these locations for treatment).
- Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.
- All insertive sexual practices (oral, vaginal and anal) put individuals at risk for STI.
- Treatment of curable STI is necessary to mitigate sequelae of infection and to prevent further transmission.
- Hepatitis A & B immunizations may be recommended. See Yukon Immunization Program Manual.
- Having one STI puts one at risk for other STI, including HIV. Therefore, all individuals with a STI should be screened for other STI, particularly syphilis, HIV, gonorrhea and chlamydia.
- Counselling about safer sex practices is important and effective in inducing behaviour change in individuals with or at risk for STI. This can in turn prevent re-infection and acquisition of new infections. Safer sex options include use of barrier contraceptives, reducing numbers of sexual partners, delay in onset of sexual debut and abstinence.

*** Individuals at higher risk for STI include but are not limited to: those having sexual contact with person(s) with a known STI; sexually active under 25 years of age; a new sexual partner or greater than 2 sexual partners in the past year; use of non-barrier contraception; injection drug or other substance use; sex trade workers and their clients; street involved/homeless; anonymous sexual partnering; previous STI; victims of sexual assault/abuse; men who have sex with men.**

Yukon
Health and Social Services

CHLAMYDIA REPORTABLE

Urethral, Cervical, Rectal, Pharyngeal Infection

Non-Pregnant/Non-Lactating Adults

Preferred

azithromycin 1 gm po as a single dose (A-I)

Alternate

doxycycline 100 mg po BID for 7 days (A-I)

Pregnant/Lactating Women

Preferred

azithromycin* 1 g po as a single dose (B-I) or

amoxicillin 500 mg po TID for 7 days (A-I)

*Available data suggests that azithromycin is safe and effective in pregnant and lactating women.

Considerations

(urethral, cervical, rectal, pharyngeal infections)

- If vomiting occurs > 1 hour post administration of azithromycin, a repeat dose is not required.
- Co-treatment for gonorrhea (see relevant section) should be provided if there is a positive test for gonorrhea or if treatment is being provided before test results are available.
- Doxycycline is contraindicated in pregnant women.
- **Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.**

Chlamydia Infection of the Eye

(Adult and Children ≥ 9 years)

Preferred

doxycycline 100 mg po BID for 14 days (B-III)

Alternate

azithromycin 1 g po as a single dose

Considerations (eye infections)

- Children < 9 years of age - consult pediatric Infectious Disease physician.
- All patients should be followed to ensure resolution of infection; test of cure (TOC) using chlamydia NAAT (nucleic acid amplification test) where available, should be performed in all cases. NAAT testing has improved sensitivity, but if not available, use culture.
- Patients should also have genitourinary specimens submitted for C. trachomatis

Contacts (all chlamydia cases)

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow Up (all chlamydia cases)

- Test of cure (TOC) is NOT ROUTINELY INDICATED when:
  - recommended treatment agent is taken
  - symptoms and signs have resolved
  - there is no re-exposure to an untreated partner
- TOC IS RECOMMENDED when:
  - compliance is sub-optimal or uncertain
  - patient is pregnant
  - patient is a child (< 14 years)
  - non-genital site involved (e.g. eye, rectum, pharynx)
  - treatment agent other than azithromycin or doxycycline has been used
- TOC, if indicated, should be done using NAAT 3 - 4 weeks after completion of effective treatment to avoid false-positive results due to the presence of non-viable organisms.
- Re-screening of all individuals diagnosed with chlamydia is recommended after 6 months.
- Infants born to untreated mothers must be closely monitored for signs of chlamydial infection (e.g. conjunctivitis, pneumonitis). Prophylaxis is not routinely recommended unless follow up is unlikely to occur.

Lymphogranuloma Venereum (LGV)

refer to Canadian Guidelines on STIs

Etiology

- Caused by *Chlamydia trachomatis*, serovars L1, L2, L3.
- LGV can be transmitted through vaginal, anal or oral sexual contact.
- In general, an uncommonly reported STI in Canada.

Considerations

LGV strains of *C. trachomatis* are more invasive, preferentially affecting the lymph tissue. If a patient presents with a painless genital papule, proctitis (especially hemorrhagic proctitis), painful inguinal/femoral lymphadenopathy AND has had a positive C. trachomatis CT/GC NAAT (nucleic acid amplification test) swab from a lesion or the rectum, please arrange for confirmatory LGV testing. Empiric treatment may be warranted.

GONORRHEA REPORTABLE

Heterosexual adults; Youth ≥ 9 years of age; Pregnant & Nursing Women

urethral, endocervical, vaginal, rectal infection

Preferred

cefixime 800 mg po as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-II)

or

cetriaxone 250 mg[&] IM in a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-II)

Alternate

spectinomycin 2 g IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-II)

or

azithromycin 2 g* po as a single dose (A-I)

Pharyngeal Infection

Preferred

ceftriaxone 250 mg[&] IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-III)

Alternate

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose (B-III)

or

azithromycin 2 g* po as a single dose (A-I)

MSM (Men who have Sex with Men) adults; Youth ≥ 9 years of age

anogenital (urethral, rectal) infection

Preferred

ceftriaxone 250 mg[&] IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-II)

Alternate

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose (B-II)

or

spectinomycin 2 g IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-II)

or

azithromycin 2 g* po as a single dose (A-I)

Pharyngeal Infection

Preferred

ceftriaxone 250 mg[&] IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose (B-III)

Alternate

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose (B-III)

* Since azithromycin resistance has been reported, this agent should only be used as monotherapy if there is a strong contra-indication to the use of cephalosporins (e.g. history of anaphylactic reaction to penicillin or allergy to cephalosporin).

[&] the recommended diluent for this IM dose of ceftriaxone is 1% lidocaine without epinephrine to final concentration of 250-350mg/mL

Considerations (all GC cases)

- All patients treated for gonorrhea should also be treated with azithromycin 1g (unless treatment for gonnorrhea was with azithromycin 2g).
- This combination therapy is thought to improve treatment effectiveness as well as potentially delay the emergence of resistance.
- **Available data suggests that azithromycin is safe and effective in pregnant and lactating women.**
- Due to higher sensitivity of NAAT over culture for *N. gonorrhoeae*, NAAT should be used for screening in most instances. Depending on the clinical situation, both culture and NAAT may be appropriate.
- Cultures for *N. gonorrhoeae* should be performed in all cases with sexual contact outside of Canada, sexual contact of a positive GC – symptomatic or asymptomatic, failure of treatment, sexual assault/abuse cases and infection in a non-genital site (e.g. eye, rectum, pharynx). Antimicrobial susceptibility testing can only be conducted on culture specimens.
- Cultures are recommended in symptomatic clients prior to treatment. (C&S and NAAT)
- Disseminated infections and infections involving the eye require expert consultation.
- **Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.**

Contacts

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow-Up

- Test of Cure **(TOC)** is recommended in the following instances:
  - Compliance is sub-optimal or uncertain
  - All pharyngeal infections and any other non-genital site involvement (e.g. eye, rectum)
  - Persistent symptoms or signs post-therapy
  - If one of the alternate treatment choices is used instead of the preferred
  - Documented antimicrobial resistance to the administered therapy
  - Case is linked to another case with documented antimicrobial resistance to the treatment given
  - Infection during pregnancy
  - Pelvic inflammatory disease (PID) or disseminated gonococcal infection is diagnosed
  - Case is a child (less than 14 years)
  - Treatment failure for gonorrhea has occurred previously in the patient or
  - There is re-exposure to an untreated partner.
- **TOC** using NAAT should be performed 3-4 weeks after the completion of effective treatment to avoid false-positive results due to the presence of non-viable organisms. **TOC** using culture may be performed 3-7 days after treatment.
- Re-screening of all individuals diagnosed with gonorrhea is recommended after 6 months.
- Neonates born to women with untreated gonorrhea should be given a single dose of **ceftriaxone 25-50 mg/kg** IM **not to exceed 125 mg** IM in a single dose (A-III); consultation with a pediatric specialist is recommended. Prophylactic co-treatment for chlamydial infection is not recommended unless follow-up cannot be guaranteed (see chlamydia).

SYPHILIS REPORTABLE

Treatment and follow-up testing of all suspected or confirmed cases of syphilis should be done in consultation with YCDC/Infectious Disease specialist.

Non-HIV Infected/ Non-Pregnant Adults

Primary, Secondary, Early Latent
(< 1 year duration)

Preferred

long acting benzathine penicillin G 2.4 mu IM as a single dose (must be ordered through YCDC)

Alternate

(only for penicillin allergic patients)
doxycycline 100 mg po BID for 14 days (B-II)

Late Latent
(> 1 year duration or unknown duration and cardiovascular)

Preferred

long acting benzathine penicillin G 2.4 mu IM weekly for 3 consecutive weeks
(must be ordered through YCDC)

Alternate

(only for penicillin allergic patients)
doxycycline 100 mg po BID for 28 days (B-II)

Non-HIV Infected/ Pregnant Adults

Primary, Secondary, Early Latent

long acting benzathine penicillin G 2.4 mu IM weekly for 2 doses (must be ordered through YCDC)

Late Latent

long acting benzathine penicillin G 2.4 mu IM weekly for 3 consecutive weeks
(must be ordered through YCDC)

Considerations

- All pregnant women should be screened for syphilis. Screening should be performed in the first trimester and again at the time of delivery. In women at high risk of acquisition or re-infection with syphilis in their current pregnancy, more frequent screening is recommended.
- For pregnant women with reactive serology, consultation with YCDC is recommended. Consultation will identify if the woman is a known case, and has a history of prior treatment or stable serology.
- All pregnant women with infectious syphilis should be managed in conjunction with a STI specialist. If the mother is >20 weeks gestation, a detailed fetal ultrasound should be performed and she should be managed together with a materno-fetal specialist.
- Treatment of infectious syphilis in pregnancy may precipitate a Jarisch- Herxheimer reaction which may cause fetal distress or premature labour; therefore all patients > 20 weeks gestation should undergo fetal monitoring for 12-24 hours after administration of benzathine penicillin.
- There is no satisfactory alternative to penicillin in pregnancy. Penicillin allergic pregnant women should be considered for desensitization followed by treatment with long acting benzathine penicillin.
- Doxycycline is not recommended for use during pregnancy.

All Adults

Neurosyphilis

crystalline penicillin G 4 mu IV q4h for 10-14 days (A-II)

Considerations (All Neurosyphilis)

- CSF examination for cell count and differential, protein, glucose and VDRL is recommended to establish a diagnosis of neurosyphilis and is indicated in all patients with neurologic or eye/ear symptoms or signs, and patients meeting other criteria (refer to syphilis chapter in Canadian Guidelines on Sexually Transmitted Infections).

Considerations (HIV Co-Infection)

- Patients with HIV co-infection should be managed with a STI/ HIV specialist. It may be recommended that certain HIV infected patients without evidence of neurologic involvement receive 3 weekly doses of **long acting benzathine penicillin 2.4 mu IM.**
- Some co-infected patients may require a longer course of treatment, as well as closer and longer follow-up.

Considerations (all syphilis cases)

- Even after adequate treatment, syphilis treponemal tests (TT) usually remain positive for life. Therefore, not everyone with positive serology will require treatment. With documentation of adequate treatment in the past, patients need not be re-treated, unless there is clinical or serological evidence of re-infection or treatment failure.
- Past history of treatment for syphilis may be available from YCDC and may help to guide current management.

Contacts (all syphilis cases)

- All sexual contacts of infectious syphilis (primary, secondary and early latent) must be located, tested and treated. Minimum trace back periods are as follows: primary syphilis: 3 months, secondary syphilis: 6 months, early latent: 1 year. Trace back periods may be extended if no partners identified or if partners test negative.
- For pregnant women with reactive syphilis serology and infants born to mothers with reactive serology, follow-up will depend on maternal and neonatal history; advice should be sought from an ID specialist.
- Regarding late latent syphilis: children of female cases and regular partners of all cases should be tested and treated if found to be infected.

Follow-Up (all syphilis cases)

- Follow-up with serial RPR is recommended at 1 (possibly), 3, 6, 12 months after treatment in infectious (primary, secondary and early latent) cases. For late latent syphilis, serology should be repeated at 12 and at 24 months post therapy unless RPR non-reactive. For neuro-syphilis, serology should be repeated at 6, 12 and 24 months post completion of treatment. Repeat LPs and CSF examination will also be required for follow-up.
- HIV co-infected individuals – any stage of syphilis – follow-up serology should be repeated at 1 (possibly), 3, 6, 12, and possibly extended to 24 months following treatment regardless of RPR result.
- HIV testing should be done at the time syphilis is diagnosed and repeated in 1 and 3 months in patients with infectious syphilis.

EIA Syphilis Serology

- In July 2014 the BC Public Health Microbiology Reference Laboratory, (BC-PHMRL) switched the preliminary screening test for syphilis from the Rapid Plasma Reagin (RPR) antibody test to an Enzyme Immunoassay (EIA), a *Treponema pallidum* specific antibody test.
- In most cases, *Treponema pallidum* antibodies persist for the life of a patient and therefore the EIA test will detect a greater number of old syphilis cases.
- The EIA treponeme-specific test is similar to the TPPA and FTA-Abs tests used for confirmatory syphilis testing.
- Confirmatory tests will no longer need to be ordered as they will be automatically done by the BC-PHMRL as appropriate.
- EIA testing allows for automated, high volume syphilis screening.
- For more information contact YCDC at 667-5080.

HIV/AIDS REPORTABLE

(Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome)

All individuals having unprotected sexual intercourse (oral, vaginal or anal), injecting drugs, sharing needles and other injection drug use equipment, and/or infected with other STI are at risk of HIV infection. The presence of a STI increases the risk of acquisition and transmission of HIV.

Testing

HIV antibody testing should be offered to all at risk individuals, including those diagnosed with another STI. Testing should be done with the patient's consent after a full discussion of the implications and limitations of the test.

HIV results, both positive and negative, should be given in person whenever possible.

Assuming no change in risk factors, there is no need to test more frequently than intervals of 3-6 months after their last potential exposure. Encouragement and support to modify risk behaviour should be provided.

Individuals testing positive must be counselled regarding their obligation to reduce/prevent transmission.

Point-of-care (POC) rapid tests for HIV antibodies are available for restricted clinical use within the hospital setting, through Yukon Hospital Corporation. All positive HIV POC tests require confirmatory HIV testing.

HIV Testing In Pregnancy

HIV testing in pregnancy is strongly recommended as part of routine prenatal care. Testing should be accompanied by informed consent.

Referral

- Newly diagnosed HIV positive individuals require medical, emotional and psychological support.
- Patients should be referred to a HIV specialist.
- Patients should be informed of local HIV/AIDS support groups (see STI Resources on back page).
- All confirmed and probable cases of HIV should be reported to YCDC/Yukon Chief Medical Officer of Health.

Contacts

- Identification and contact tracing of all known sexual and needle-sharing partners of HIV infected patients should be undertaken. It may be necessary to go back several years. Knowledge of a previous negative test can assist in determining the time frame for contact identification.
- Upon request, YCDC can assist in eliciting a list of contacts as well as locating and counselling these individuals.

PELVIC INFLAMMATORY DISEASE (PID)

Outpatients

(non-pregnant/non-lactating adults)

Preferred

ceftriaxone 250 mg IM as a single dose PLUS **doxycycline 100 mg** po BID for 14 days (A-II)

WITH or WITHOUT **metronidazole 500 mg** po BID for 14 days* (B-III)

Alternate**

ofloxacin 400 mg po BID for 14 days

WITH or WITHOUT **metronidazole 500 mg** po BID for 14 days* (A-II)

Considerations

- *Addition of metronidazole is recommended when concurrent anaerobic infection is a concern (i.e. bacterial vaginosis, presence of tubo-ovarian abscess and/or HIV co-infection).
- Patients on metronidazole should be advised not to take alcohol for the duration of treatment and for 24 hours after because of possible disulfiram-like (Antabuse) reaction.
- **Ofloxacin may continue to be used as an alternate treatment agent if antimicrobial susceptibility testing for gonorrhea is available and quinolone susceptibility is demonstrated. If quinolones are utilized and antimicrobial resistance testing is not available, a test of cure must be obtained. The timing of test of cure is 3-4 weeks after completion of antibiotics when test is used and 3 - 7 days after treatment if a culture test is used.
- If an IUD is in place, consideration should be given to removal after therapy has been initiated and at least 2 doses of antibiotics have been given.

Contacts

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow Up

- All women treated as outpatients need careful follow-up and should be re-evaluated 2-3 days after treatment is initiated.
- Referral to a specialist for consideration of hospitalization if individual is:
  - not responding to treatment
  - unable to tolerate oral medication
  - pregnant/breastfeeding
  - immunocompromised, such as with HIV infection
  - a child (< 14 years)
  - moderate to severe illness, nausea and vomiting, or high fever
  - adnexal mass or tubo-ovarian abscess

  and/or:
  - surgical emergency (e.g. acute appendicitis cannot be excluded)

EPIDIDYMO-ORCHITIS

If likely due to gonorrhea and/or chlamydia infections

Preferred

ceftriaxone 250 mg* IM as a single dose PLUS **doxycycline 100 mg** po BID for 14 days (A-I)

*the recommended diluent for this IM dose of ceftriaxone is 1% lidocaine without epinephrine to final concentration of 250-350mg/mL

Alternate**

ciprofloxacin 500 mg po as a single dose PLUS **doxycycline 100 mg** po BID for 14 days (A-I)

**Quinolone antibiotics ciprofloxacin/ofloxacin may only be considered as an alternate treatment agent if antimicrobial susceptibility testing for gonorrhea is available and quinolone susceptibility is demonstrated. If quinolones are utilized and antimicrobial resistance testing is not available, a test of cure must be obtained. The timing of test of cure is 3-4 weeks after completion of antibiotics when a nucleic acid amplification test is used and 7 days if a culture test is used.

If likely due to non-sexually transmitted organisms

ofloxacin 300 mg po BID for 14 days (A-I)

Considerations

- Depending on sexual history, gonococcal and/or chlamydial infections should be considered as the etiology of acute epididymo-orchitis in all sexually active men especially those under age 35 years (2/3 of epididymitis cases). Non-sexually transmitted epididymo-orchitis occurs more frequently in men > 35 years, those who have recently undergone urinary tract instrumentation or surgery and those with abnormalities of the urinary tract.
- Bed rest, scrotal elevation and support and analgesics are also recommended.

Contacts

(sexually acquired epididymo-orchitis)

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow Up (all epididymo-orchitis)

All patients who fail to improve after 48-72 hours should undergo re-evaluation and reassessment for alternate diagnosis.

GENITAL HERPES SIMPLEX

First Episode

acyclovir 400 mg po TID for 7-10 days (A-I) or

famciclovir 250 mg po TID for 5 days (A-I) or

valacyclovir 1 g po BID for 7-10 days (A-I)

*Note that duration of therapy depends on severity of outbreak

Recurrent Lesions

Episodic Therapy

valacyclovir 500 mg po BID for 3 days (B-I) or

valacyclovir 1 g po QD for 3 days (B-I) or

famciclovir 125 mg po BID for 5 days (B-I) or

acyclovir 800 mg po TID x 2 days (B-I) or

famciclovir 1000 mg po bid x 1 day (note: MUST be started within hours (not days) of appearance of signs and symptoms)

Suppressive Therapy (Non-Pregnant)

acyclovir 400 mg po BID (A-I) or

famciclovir 250 mg po BID (A-I) or

valacyclovir 500 mg po QD (A-I) [for patients with ≤ 9 recurrences per year] or

valacyclovir 500 mg po BID or 1 g po QD (A-I) [for patients with > 9 recurrences per year]

Suppressive Therapy (Pregnant)

Suppressive therapy in late pregnancy is the "standard of care" and is highly recommended to reduce possible transmission to neonate.

acyclovir 400 mg po TID initiated at 36 weeks until parturition (A-I) or

valacyclovir 500 mg po BID initiated at 36 weeks until parturition (A-I)

* Antiviral therapy may be initiated earlier in pregnancy in patients experiencing symptomatic outbreaks.

Considerations

- Topical acyclovir does not alleviate symptoms or signs and should not be used.
- Choice of treatment depends on dosing frequency and cost.
- Counselling is an essential part of management.
- Oral acyclovir, famciclovir and valacyclovir are comparatively efficacious.
- A shorter course of acyclovir 800mg PO tid for 48 hours appears as efficacious as the approved 5 day regimen
- Start famciclovir preferably less than 6 hours and valacyclovir preferably less than 12 hours after the first symptoms appear.

Management options

Treatment options for recurrent lesions are three fold: no treatment, episodic therapy or suppressive therapy.

The decision to start therapy is a subjective one, balancing the frequency of recurrence with the cost and inconvenience of therapy.

- No Treatment: Antiviral therapy is not necessary in all cases, particularly when recurrences are both mild and infrequent and in cases where sexual transmission is not a concern.
- Episodic therapy: Treatment should be started as soon as possible, preferably during the prodromal symptoms or within hours of the development of a lesion.
- Suppressive therapy: Reduces recurrence rates, as well as asymptomatic shedding and sexual transmission.

NON-GONOCOCCAL URETHRITIS (NGU)

Case Definition:

- Inflammation of the urethra with or without a mucoid, muco-purulent or purulent urethral discharge
- **and/or** ≥5 polymorphonuclear leukocytes per oil immersion field (x1000) in ≥5 non-adjacent, randomly selected fields in a smear of urethral secretions (if available)
- **and** absent gram-negative intracellular diplococci on gram stain of urethral secretions (if available)
- **and** negative tests or no tests performed for gonorrhea and chlamydia.

Empiric treatment for NGU

(no tests done or specimens collected but test results not available)

Heterosexual

Preferred

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose

Alternate

spectinomycin 2 g IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose or **azithromycin 2 g*** po as a single dose (A-I)

MSM (Men who have Sex with Men)

Preferred

ceftriaxone 250 mg IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose

Alternate

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose or **azithromycin 2 g*** po as a single dose (A-I)

* Since azithromycin resistance has been reported, this agent should only be used as monotherapy if there is a strong contra-indication to the use of cephalosporins (e.g. history of anaphylactic reaction to penicillin or allergy to cephalosporin).

Empiric treatment for NGU

(negative tests for gonorrhea and chlamydia)

Preferred

azithromycin 1 g po as a single dose (A-I)

Alternate

doxycycline 100 mg po BID for 7 days (A-I)

Considerations

- All patients should be tested for gonorrhea and chlamydia.
- **If urethritis is diagnosed clinically, immediate treatment is recommended. Treat presumptively for gonorrhea and chlamydia pending laboratory results.**
- Patients who remain persistently symptomatic 3-4 weeks after treatment for gonorrhea and chlamydia **and** in whom a diagnosis of NGU has been made **and** persistent or repeat infection with gonorrhea has been ruled out should be treated with **doxycycline 100 mg** po BID x 7 days.
- **Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.**

Contacts

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow-Up

If symptoms persist or recur, patients should return for re-evaluation.

MUCO-PURULENT CERVICITIS (MPC)

Case Definition:

- Inflammation of the cervix with a muco-purulent or purulent cervical discharge or cervical bleeding on insertion of a swab
- **and** negative tests from genitourinary specimens for chlamydia and gonorrhea.

Empiric treatment for MPC

(no tests done or specimens collected but test results not available)

Preferred

cefixime 800 mg po as a single dose (B-III) PLUS **azithromycin 1 g** po as a single dose

Alternate

spectinomycin 2 g IM as a single dose (A-I) PLUS **azithromycin 1 g** po as a single dose or **azithromycin 2 g*** po as a single dose (A-I)

*Since azithromycin resistance has been reported, this agent should only be used as monotherapy if there is a strong contra-indication to the use of cephalosporins (e.g. history of anaphylactic reaction to penicillin or allergy to cephalosporin).

Empiric treatment for MPC

(negative tests for gonorrhea and chlamydia)

Preferred

azithromycin 1 g po as a single dose

Alternate

doxycycline 100 mg po BID for 7 days

Considerations

- **Diagnosis of MPC should not be made in pregnancy** due to poor positive predictive value of any criteria for defining MPC in pregnant women.
- *Not all patients with vaginal discharge have MPC; vaginal speculum examination is required to make this clinical diagnosis
- All patients should be tested for gonorrhea and chlamydia.
- **If cervicitis is diagnosed clinically, immediate treatment is recommended. Treat presumptively for gonorrhea and chlamydia pending laboratory results.**
- Patients who remain persistently symptomatic 3-4 weeks after treatment for gonorrhea and chlamydia **and** in whom a diagnosis of MPC has been made **and** persistent or repeat infection with gonorrhea has been ruled out should be treated with **doxycycline 100 mg** po BID x 7 days.
- **Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.**

Contacts

All contacts in the last 60 days, regardless of symptoms or signs, must be located, examined, tested and treated. It may be necessary to extend this time period until a sexual contact is identified.

Follow-Up

If symptoms persist or recur, patients should return for re-evaluation.

VAGINITIS

Bacterial Vaginosis

Non-Pregnant/ Lactating Women

Preferred

metronidazole* 500 mg po BID for 7 days (A-I) or

metronidazole gel (Nidagel®) 0.75%, one applicator (5 g)** intravaginally QD for 5 days (A-I) or

clindamycin cream 2%, one applicator (5 g) intravaginally QD for 7 days (A-I)

Alternate

clindamycin 300 mg po BID for 7 days (A-I) or

metronidazole* 2 g po in a single dose (A-1)

* The effect of oral metronidazole on the nursing infant is unknown but no adverse effects have been reported in numerous studies; infant should be observed for diarrhea.

Pregnant Women

Preferred

metronidazole 500 mg po BID for 7 days (A-I)

Alternate

clindamycin 300 mg po BID for 7 days

Treatment for Recurrent BV

Pregnant and Non-Pregnant Women

Preferred

metronidazole 500 mg po BID for 10-14 days (B-III) or

metronidazole gel (Nidagel®) 0.75%, one applicator (5 g)** intravaginally QD for 10 days (B-III), followed by suppressive therapy of **metronidazole gel twice a week** for 4-6 months (B-III).

Considerations

- For therapy with metronidazole, a 7 day oral course and a 5 day course of gel are equally efficacious (cure rate 75–85%). A single oral dose also has a cure rate of 85% but a higher relapse rate at 1 month (35–50% vs. 20–33%) (A-I).
- Patients on metronidazole should be advised not to consume alcohol for the duration of treatment and for 24 hours after because of possible disulfiram-like (Antabuse™) reaction.
- **Nidagel® NOT Metrogel® or Flagystatin®
- Clindamycin cream is oil-based and may cause latex condoms or diaphragms to fail.
- Treatment of male sexual partners is not indicated and does not prevent recurrence.
- In women with recurrent BV, condom use or abstention should be introduced until the woman is free of recurrences.

Asymptomatic: Treatment is *unnecessary* except in cases of:

- pregnant women with history of high-risk pregnancy (previous preterm delivery),
- prior to IUD insertion,
- prior to gynecologic surgery or upper genitourinary tract instrumentation or
- prior to therapeutic abortion.

Pregnant Women:

- Low risk, asymptomatic pregnant women do not need to be screened and/or treated for BV.
- Treatment with an oral agent in asymptomatic pregnant women with a history of pre-term delivery may reduce the risk of preterm rupture of membranes and stillbirth.
- Intravaginal agents are not recommended in pregnancy as they have not been shown to decrease the risk of adverse pregnancy outcomes.
- Based on multiple studies, data supports the safety and lack of teratogenicity of systemic metronidazole in pregnancy. Metronidazole is not contraindicated during pregnancy.

Vulvovaginal Candidiasis

Non-Pregnant/ Non-Lactating Women

Preferred

Topical Agents

Intravaginal, over-the-counter azole ovules and creams (e.g., clotrimazole, miconazole) (A-I) or

Oral Agents

fluconazole 150 mg po as a single dose (B-III)

Pregnant/Lactating Women

Preferred

Topical azole for 7 days (A-1)

Considerations

- Treatment is unnecessary for asymptomatic infection.
- Many topical/intravaginal agents are oil based and might weaken latex condoms and diaphragms.
- Treatment of sexual partners is not routinely recommended unless male partner has candida balanitis. In males, use a topical azole cream BID for 7 days.
- Some effective topical azole agents are: butoconazole, clotrimazole, miconazole and terconazole.
- Fluconazole is contraindicated in pregnancy but considered an option in lactating women, if benefits outweigh risks.

Trichomoniasis

Non-Pregnant/ Non-Lactating Women

Preferred

metronidazole 2 g po as a single dose (A-I)

Alternate

metronidazole 500 mg po BID for 7 days (A-I)

Pregnant/Lactating Women

Preferred

metronidazole* 2 g po as a single dose (A-I)

* The effect of oral metronidazole on the nursing infant is unknown but no adverse effects have been reported in numerous studies; infant should be observed for diarrhea.

Considerations

- **Pregnant Women:** Treatment is recommended only if symptomatic.
- Based on multiple studies, data supports the safety and lack of teratogenicity of systemic metronidazole use in pregnancy.
- Intravaginal metronidazole gel is not effective.
- Patients on metronidazole should be advised not to consume alcohol for the duration of treatment and for 24 hours after because of possible disulfiram-like (Antabuse) reaction.
- Sexual partners should be treated simultaneously.
- **Patients and contacts should abstain from unprotected sexual intercourse until treatment in both is completed or 7 days after single dose therapy.**

Partner Notification for STI

- Partner notification will identify those at risk, reduce disease transmission/re-infection and ultimately prevent disease sequelae.
- **It is mandated under the *Yukon Public Health and Safety Act* that every attempt is made to identify, locate, examine and treat partners/contacts of all cases.**
- Contacts ideally should be tested prior to any treatment being given.
- Physician/case manager are required to provide partner names and locating information on the Contact Tracing form and forward to YCDC.
- If testing and/or treatment of partners is not confirmed on the Contact Tracing Form, YCDC will initiate follow up.
- YCDC initiates follow up on all out of territory/country referrals of cases and partner(s).

STI Resources

- Medical and case consultation for STI/HIV is available through YCDC by calling: 867-667-8323
- *Are you considering an HIV test?* (2006) Pamphlet: BC Centre for Disease Control
- Sexual health, toll-free, 24 hour information line for the general public: 1-877-YK-STYLE (1-877-957-8955) or **www.bettertoknow.yk.ca**
- For information on community based HIV organizations: Blood Ties Four Directions – 867-633-2437 or **www.bloodties.ca**
- Public Health Agency of Canada, *Canadian Guidelines on Sexually Transmitted Infections* available at: **www.phac-aspc.gc.ca**

Considerations in Persons Under 19 Years of Age

- In all cases, where a person under 19 is suspected or confirmed to have a STI an assessment report should be carried out by the clinician to determine if additional reporting is required.
- All Yukoners are required by law (Child and Family Services Act SY 2008, C.1) to immediately report if they have reason to believe that a child is in need of protective intervention; this includes suspected sexual abuse or exploitation. Where there is concern about a child's safety or welfare, including suspected sexual assault, abuse or exploitation, contact Family and Children's Services 24/7 at 867-667-3002 (in Whitehorse), a social worker at Regional Services (in rural communities – see phone listing at www.hss.gov.yk.ca/childabuse.php) or the RCMP.

STI Services

Yukon Communicable Disease Control (YCDC)
#4 Hospital Road
Whitehorse, Yukon
867-667-5080 or 867-667-8323 or
toll-free in Yukon: 1-800-661-0408 ext. 8323

Yukon Community Health Centres
For contact info, visit
www.hss.gov.yk.ca/healthcentres.php

This guideline includes the level of recommendation and quality of evidence indicators for the treatment recommendations. The indicators reflect a combination of the methodologies from the U.S. Preventive Services Task Force and the Canadian Task Force on Preventive Health Care and have been modified and simplified for use as outlined below (re-printed with permission from the *Canadian Guidelines on Sexually Transmitted Infections*).

Levels of Recommendation

A **Strongly recommends** that clinicians routinely provide the treatment to eligible patients. **Good evidence** that the treatment improves important health outcomes and concludes that benefits substantially outweigh harms.

B Recommends that clinicians routinely provide the treatment to eligible patients. At least **fair evidence** that the treatment improves important health outcomes and concludes that benefits outweigh harms.

C No recommendation for or against routine provision of the treatment. At least **fair evidence** that the treatment can improve health outcomes but concludes that the balance of the benefits and harms is **too close to justify a general recommendation**.

D Recommends against routinely providing the treatment to asymptomatic patients. At least fair evidence that the treatment is **ineffective** or that harms outweigh benefits.

I **Evidence is insufficient** to recommend for or against routinely providing the treatment. Evidence that the treatment is effective is **lacking, of poor quality or conflicting**, and the balance of benefits and harms cannot be determined.

Quality of Evidence

I Evidence from at least one properly randomized, controlled trial.

II Evidence from at least one well-designed clinical trial without randomization, from cohort or case-control analytic studies (preferably from more than one centre), from multiple time-series studies or from dramatic results in uncontrolled experiments.

III Evidence from opinions of respected authorities based on clinical experience, descriptive studies or reports of expert committees.